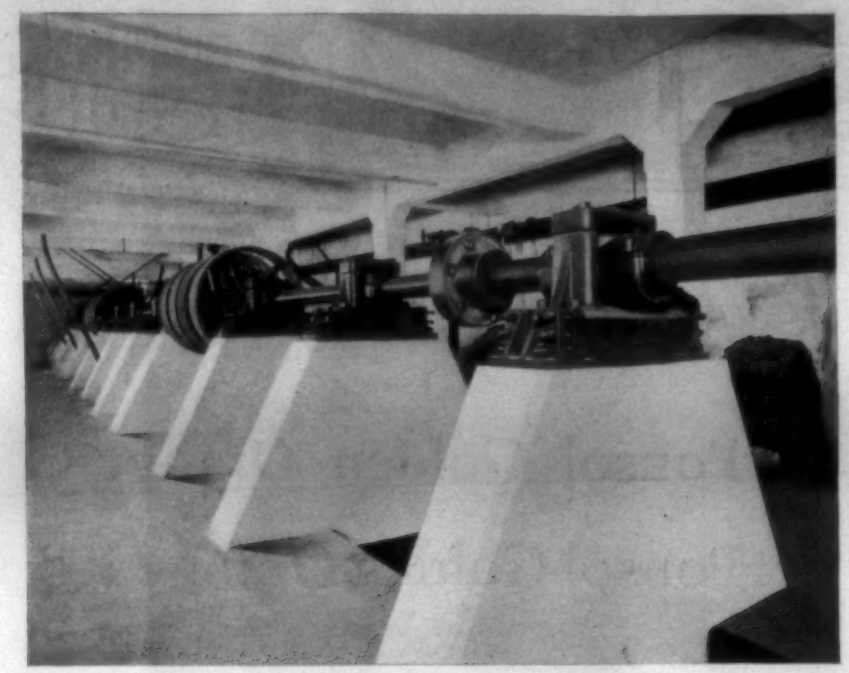
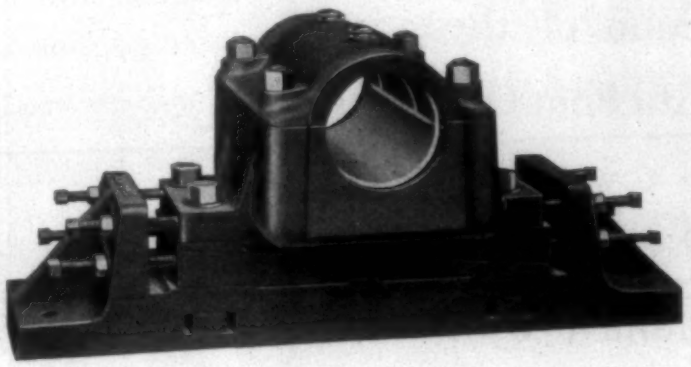
SOUTHERN
TEXTILE BULLETIN
VOLUME 27 CHARLOTTE, N. C., THURSDAY, OCTOBER 9, 1924 NUMBER 6

Power Transmission Machinery

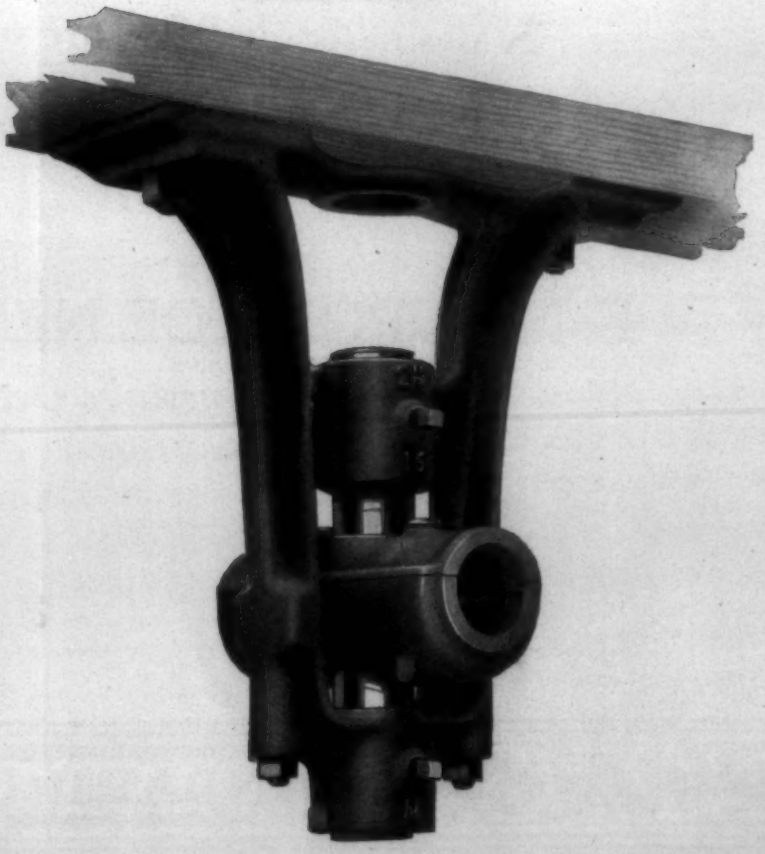
We furnish a mechanical equipment which will transmit power from its source to your machinery for less coal than it takes to do it in any other way.





Our service insures the continuance of this coal economy for less money than such insurance can be purchased for anywhere else.

Let us explain to you how such economies can be secured, and why our service will maintain them.



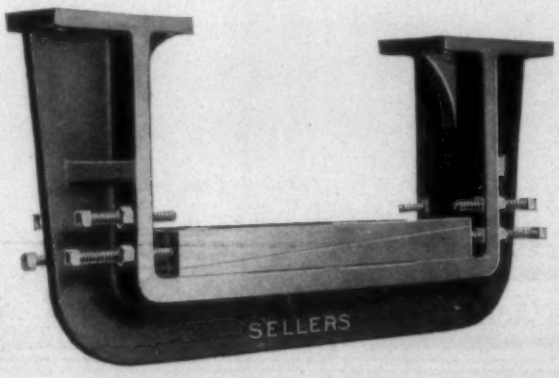
WILLIAM SELLERS & CO., Incorporated

Main Office and Works: PHILADELPHIA, PA.

SOUTHERN STATES REPRESENTATIVE
A. G. NEW, GREENVILLE, S. C.

MANUFACTURERS
of
POWER TRANSMISSION SPECIALTIES
MACHINE TOOLS INJECTORS

Heavy Sling Hangers

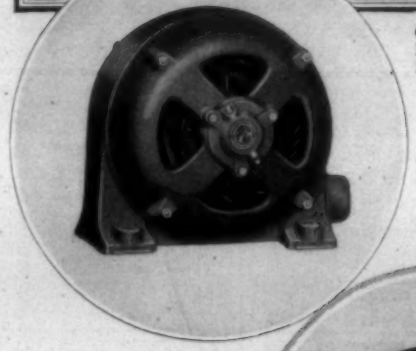


Fairbanks-Morse Textile Motors

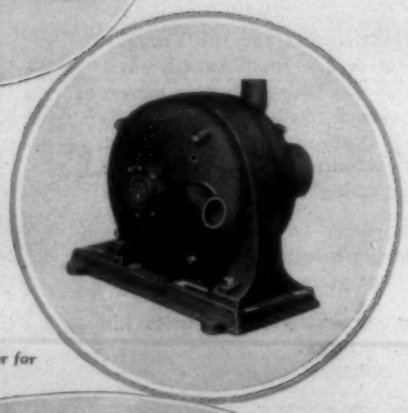
Equipped with

Ball Bearings

Group of 3-hp. Fairbanks-Morse Type T Ball-Bearing Motors for individual drives.

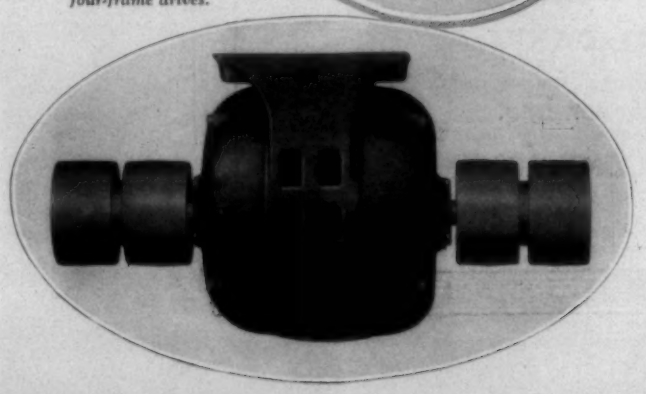


Type T Ball-Bearing Motor made in sizes from ½ to 15 hp. for driving looms, rovers, spinners, twisters, etc.



Type EH enclosed and ventilated Ball-Bearing Motor for picker and opener-room drives and similar installations.

Type H Ball-Bearing Motor for four-frame drives.



FAIRBANKS-MORSE engineers were among the very first to recognize the many advantages of ball bearings, and have applied them on all standard types of motors for over a decade. During this time close observation of performance under service conditions in different branches of industry has demonstrated the fact that for dependability and economy the ball-bearing motor is not approached.

There is no appreciable wear on ball bearings, and they are not affected by ordinary belt or chain tension or gear pressure. The uniformly small air gap is maintained, and burnouts are avoided because rotors do not drop down on stators.

Reduce Maintenance

Fairbanks-Morse ball-bearing housings are constructed so that the grease is kept in and dirt and dust kept out. There is no oil to work into the windings or drip outside the motor, thereby saving repairs as well as losses from soiled products. Frames and windings are free from oil smear, and lint cannot cake with oil, but can be blown out easily.

Ball bearings run for extremely long periods without attention. Only 20 minutes and a few cents worth of grease are required to pack the bearings of a motor and it lasts for over a year.

Additional advantages are pointed out in Bulletin H288 on "Ball-Bearing Motors for the Textile Industry," which will be mailed on request.

A cordial invitation is extended to textile men to visit the Fairbanks-Morse exhibit at the Greenville Exposition

Fairbanks, Morse & Co.

Manufacturers · CHICAGO

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SOUTHERN
TEXTILE BULLETIN

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VOLUME 27 | CHARLOTTE, N. C., THURSDAY, OCTOBER 9, 1924 | NUMBER 6

Reclaiming the Industrially Injured

E. Van Eurbing, of Clark Thread Company, Newark, N. C., before Textile Section, National Safety Council, at Louisville, Ky.

THE wearing-out, breaking-down or crippling of the human machine in industry will continue to occur as long as work exists. Despite the wonderfully successful efforts of Safety Engineers to protect these machines, by safeguards, from external violence, and by better organization and education from the dire sequel of carelessness and neglect, they still continue to become maimed and crippled.

Altough the Employment Manager and the Medical Department have striven together to pick the right type of human machine for the job at hand, and although they have greatly lessened the number of misfits, some of the machines still continue to give out or are broken under the strain of unsuitable work.

In spite of the efforts of the Industrial Physician who strives constantly to protect his machines by providing with hygenic and sanitary places in which to work, and even though their health is guarded by well conducted Cafeterias and by periods of rest and recreation, some of them become disabled; others develop internal disturbances which predispose to early and ready injury.

Granted this, our concern is, "what shall be done with these broken and useless by-products of our busy industrial life?"

The answer is to be found in industry itself. As long as there is any possibility of salvage, the mechanical machine is repaired and started back at work. So it should be with the human machine.

The importance of this restoration to usefulness of the industrially injured is soon apparent when we inquire into some of the factors which underlie it. According to an admittedly conservative estimate by Commissioner Charles H. Verrill, of the United States Enployees' Compensating Commission, there are at least 2,500,000 industrial accidents resulting in temporary disability every year. Our records in New Jersey show an increase of reportable accidents. There were 42,990 in 1921, 46,603 in 1922, and 66,641 in 1923.

Perhaps some of this may be due to a better system of reporting accidents of late, but the importance of the great number of injured is only accentuated. Thousands of these have suffered grevious and irreparable injuries. It is estimated that 75,000 have amputations—5,000 have lost the sight of an eye—and over 500,000 have stiff or weakened hands, arms, or legs as the results of fractures, severe burns, or extensive damage of the soft parts.

Uuless these disabled workers are rehabilitated, or, as H. Mock aptly terms it, "reclaimed", many of them will become "cripples", a term we would do well to strike out of our working vocabulary.

During the long days of inactivity and suffering following a severe accident, the patient's mind is constantly troubled. He is disabled, and almost invariably he holds his work and employer directly responsible, forgetting his own carelessness or disobedience. He worries about the pains of the days to come, he is uneasy about his family, for he knows the temporary compensation is not enough to keep things going smoothly. Perhaps they can manage for a little while, but when will he be able to work again? Here one of the most insidious of evil factors enters. "What if he should be unable to work?" The thought terrifies him. He thinks of it over and over again. He broods about it. He recalls some friend who has been "crippled", and his anxiety and morbidness brings about a state which greatly retards his recovery.

In this depressed and doubting frame of mind there is an unwillingness to suffer the further pain which is often necessary to strengthen a weakened limb or loosen a useless stiff joint; and so the man becomes more or less disabled.

There are three ways in which these workers are dealt with:

(1) Unfortunately some employers still consider the human machine as something to use to the utmost for gain. When it has become disabled, they are no longer interested in it. They pay the injured what compensation the law demands, and then fire him, feeling that they have entirely discharged their responsibility, for to reemploy such a handicapped worker would add a compensation hazzard which they do not feel morally obligated to assume.

The doom of these handicapped workers is almost certain, for if the concern responsible for their injury will not put themn back at useful work, their chances of finding a suitable job in another factory are small indeed. Other employers are not interested in them, for there is no doubt but that the worker who has lost part, or all, of the use of an arm, eye, or leg is a greater hazard, in most industries, than one not so handicapped.

They drift from one job to another, constantly dropping to a lower scale because of their unfitness and lack of training in the newer work, until finally they relinquish all effort work. These make up the loafer and beggar of the street corner, the shoe-string merchant, and the physically handicapped and mentally debased for whom their families and communities must provide.

A step toward the solution of this problem has been suggested by Hazleet. If the State carried the insurance of these handicapped workers, the employer would no longer need to discharge them to protect himself from an increased hazzard and compensation claim. The State, too, would benefit through the increased earning power of the insured, and through the lessened number of those dependent upon State aid.

The New Jersey State Department of Labor has established a fund from which one-eyed workers who are blinded by accident to their sole remainging eye, receive the difference in compensation between blindness of one eye (100 weeks) and total blindness (400 weeks).

Prior to the establishing of this fund it was almost impossible for one-eyed workers to obtain employment in our State.

(2) Some concerns, through a mistaken idea of kindness, give their seriously handicapped workers easy jobs, such as gateman watchmen, or messenger, but the very softness of these jobs robs them of all incentive; bitterness of the realization of their lost ambitions adds to their incompetency, and many of them drift on into the scrap heap.

(3) The third group of employers have a more enlightened viewpoint. Thep try to return all of their disabled to suitabe and useful work. This often necessitates teaching them an entire new trade, or breaking them in in a new department; but it keeps up the morals and confidence of the employees in their company.

Industry has been concerned with the problem of industrial hygiene and the conservation of human productiveness for the past fifteen years, and some industries have had elaborately organized departments for reclaiming their sick and injured for many years, according to Mock. But it took the Great War, with its thousands of dramatically wounded, to awaken us to the necessity of rehabilitating or refiting all of our handicapped, so they might be able to compete with the more fortunate.

If a man is gainfully employed, and believes that by his own efforts he may occupy an independent and self-supporting place in his community, he will soon forget his limitations and devote all his energy to making good.

Man's chief limitation is within himself. The loss of an arm or leg does not of necessity make a cripple.

We are all of us familiar with someone so handicapped, who has made good, and as our work of reconstruction continues, this number will be greatly increased.

Industry's only interest in reclaiming the disabled is not by any means philanthropic. Since the advent of compensation laws, the manufacturer has been penalized for all serious injuries to his employees, and temporary compensation must be paid until the injured is able to return to work, or the case is closed in court. It is only natural, therefore, that we should make use of every means to assure the speediest possible return of our injured. Permanent Compensation must be paid not only for the actual loss of some body member, but also for every case of resulting weakness, stiffness, contraction, or

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What You Will See At The Exposition

MANY of the exhibits for the Sixth Southern Textile Exposition, to be held in Textile Hall, Greenville, October 20 to 25, are now being installed. Heavier machinery will predominate among the displays this year and in many respects the Exposition will resemble a complete cotton mill in operation.

A total of 181 exhibits will be seen this year as against 80 in the last Exposition held in 1922.

Final preparations will be made during next week and the Exposition will be expected to easily draw the largest crowd that ever assembled for a textile event in the South. Greenville is making preparations to entertain the greatest number of visitors who have ever been in the city. The housing committee has announced that there will be ample accommodations available for all who come to the show.

For the past several weeks, brief descriptions of the exhibits to be seen at the Exposition have appeared in these columns, and more of these exhibits are described below:

Stein, Hall & Co., Inc.

Stein, Hall & Co. will have a booth and all their Southern representatives will be on hand. Some of their leading products for the textile mills may be displayed but this will only be done on a small scale. These will include samples of various starches, such as corn, wheat, potato and sago flour.

National Aniline & Chemical Co., Inc.

Besides showing a general assortment of textiles of various classes, all of which have been dyed or printed with National dyes, the National Aniline & Chemical Co. will also have on display, and in actual operation, a group of small scale dyeing machines as used in laboratories for working out practical problems of interest to customers. This change in the general character of their exhibits was decided upon after every other feature had been thoroughly discussed. Since their business is essentially that of makers and sellers of coal-tar dyes to the textile mills, they believe that they are putting something before the public that the public rarely has an opportunity to see.

National Lamp Works.

The exhibit of the National Lamp Works of the General Electric Co. will be purely educational in nature, demonstrating the relation of illumination to production, the effect of glare on vision, and various types of modern equipment. The demonstrations will be supplemented with educational literature.

Atkinson, Haserick & Co.

Atkinson, Haserick & Co., 152 Congress street, Boston, Mass., will show in Spaces 95-97 the Tunstall comber, which has been operated in cotton mills in the United States during the last five years. The advantages of this machine, such as saving in floor space and motor equipment, are obvious, and representatives will point out other features such as life of the needles of the half-laps and top combs, which is almost interminable. The statement is made that a mill using six 12-head Tunstall combers in one of the Southern States found at the end of four years of running night and day that they had re-needled only two half-laps and one top comb, due to the perfect co-ordination of the whole mechanism, and particularly to the construction of the half-lap, the hang-up of the nipper, the avoidance of plucking even with a bad piece-up of the lap, and the perfect functioning of the brushes and the aspirator. Attention is called to the fact that under regular mill conditions the Tunstall comber averages better than 96 per cent efficiency, oiling and cleaning time included; also that the noil is free from flock and the machine can be regulated from 5 to 35 per cent, according to the grade of cotton and the results required. The usual unit minded by one operative is four Tunstall combers of 12 heads each, and the production of combed sliver per operative averages 5,200 pounds per 48-hour week for the best quality combing.

Fixers' labor is reduced to a minimum as cams have been eliminated and resetting is practically negligible.

Reeves Pulley Co.

This company will exhibit "The Reeves" variable speed transmission of the standard hand controlled type.

The new and unique part of their exhibit will be "The Reeves" automatic control which enables the textile mill to place the machines in range and their control automatically keeps the various machines in the range synchronized so that they will run at precisely the same speeds and require no watching. They will have this connected up in such manner that it will operate to demonstrate clearly its operation.

Another brand new improvement that they will exhibit at the show is a silent chain V-belt for "The

Reeves" variable speed transmission.

Woonsocket Machine & Press Co.

This exhibit will consist of one bale breaker, style 37, with patent stock mixer and intermittent feed apron, the bale breaker being direct connected to a vertical opener and horizontal cleaner.

One breaker lapper with double hopper feeder, one 40-inch revolving flat card, one drawing frame of four deliveries, one slubber, 12x6-inch bobbins of 32 spindles, one intermediate, 9x4½-inch bobbins fo 48 spindles.

Fales & Jenks Machine Co.

This company will show Fales & Jenks Machine Co. one spinning frame, 72 spindles, 3½-inch gauge. One twister, 52 spindles, 5½-inch gauge. One novelty twister, 28 spindles, 3½-inch gauge.

Easton & Burnham Machine Co.

This exhibit will show Easton & Burnham Machine Co. one slasher warper with 360 spool creel. One spooler, 48 spindles, 5½-inch gauge. One reel of 50 spindles, 54 inch skeins. One balling machine. One set of card grinders.

This machinery will be in full operation manufacturing 8s yarn, which will be twisted three-ply on the twister. All of this machinery is of their latest and most improved type and contains many new features of very recent development which will prove of the utmost interest to practical mill men visiting the Exposition.

Spaulding Fibre Co., Inc.

This company is planning to show a fibre mill truck or warehouse car, together with several boxes, barrels and roving cans showing different materials under construction. They will also have samples of the parts used in their receptacles as well as cross sections showing construction. In addition to this they are sending a large display board showing special parts made from vulcanized fibre. Most of these parts are used in the textile industry, but the exhibit will also include other parts which will be interesting, as they show some of the possibilities of specialites made from vulcanized fibre.

They plan to have at the Exposition their representative from the South, Alfred Thompson, together with G. E. Calhoun, from their Tonawanda plant, and S. Baril, from the Rochester, N. H. plant.

Hopedale Manufacturing Co.

The Hopedale Manufacturing Co. will exhibit at Greenville, their 40-inch high speed loom, which has been awakening great interest. This loom, while running on exhibition from 200 to 216 picks, uses 8-inch bobbin and shuttle with regular crank throw. This is not an ordinary automatic loom speeded up for short runs, but a loom particularly adapted for high speed; the frame is heavier than that used by other builders and has half-inch bolts throughout. The strains and shocks are lessened by special devices. The pick is made easy. The loom gets less jar and strain than the ordinary loom at low speed.

They shall also show their heavy broad sheeting loom with various improvements not before shown on this model. They shall also show a loom particularly adapted for coarse filling, using larger bobbins than have been seen previously on any automatic loom in the South.

Atlanta Brush Co.

Atlanta Brush Co. expects to display a complete line of textile brushes that will prove the truth of their slogan, "A Brush for Every Textile Need."

They have recently purchased a new display board which will be the center of the exhibit. This board is in five panels, and makes it possible to show any brush very quickly, with the least possible trouble.

D. A. Ebinger Sanitary Mfg. Co.

This company will exhibit their B-22 range closet, either or both of their A-3 and A-4 urinals, their C-271 cooler fountain and D-311 circular wash sink.

The D-311 circular wash sink is something entirely new and is the last addition to their line. They specialize entirely on toilet and wash room equipment for schools and factories and this circular sink adapts itself principally to factories but can also be used in schools.

Stowe & Woodward Co.

This company expects to show rubber covered rolls. The space is so limited that they shall be confined to small samples of rubber showing various densities and with a special type of rubber covered washer roll for bleacheries.

Oakite Exhibit.

In the Oakite exhibit, in Booths 29 and 30, Annex, samples will be shown of many kinds of textile fabrics and materials, which have been kier boiled, soaped out, scoured or cleaned with the aid of Oakite. Special prominence will be given to samples of cotton hosiery and underwear tubing which have been kier boiled with hte aid of Oakite. Attention will be called to the softness and whiteness of the samples, due to the use of Oakite in the cleaning processes. A staff of Oakite chemists will be in attendance to explain the use of Oakite materials.

Detroit Graphite Co.

This exhibit will cover a full line of paints for the textile industry, including Degraco house colors for the mill villages, Sta-White for the mill interior and Superior Graphite paint for the protection of metal. Several other products, established in the industry, will also be exhibited.

Arthur W. Holbrook, Inc.

This exhibit will occupy a fifty square foot space and have on display a complete installation of their trap and syphon combination fitted to a new standard drying cylinder. The purpose of the above is to demonstrate the method of removing air and water of condensation from the can. They will have on exhibition the popular sizes of their individual traps. One of these will be cut away to show the working functions of the inner part.

They will also have their newly

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Planning for Safety

Raymond B. Sherman, Employment Manager, the United States Finishing Co., Norwich, Conn., before Textile Section, National Safety Council, Louisville, Ky.

IN considering the subject of this paper, "Planning for Safety," I find it difficult to determine just where to start, for everyone at this meeting undoubtedy stands at a little different level on the scale of safety achievement. Even though this meeting represents one particular type of industry, I am certain that we all have very different situations to deal with and different obstacles with which to cope. Some have managements, believing in safety but loath to back their belief by spending money for safety; not too surprising in view of the present textile situation but nevertheless obviously short sighted to say the least; some have overseers who have not yet learned to correlate safety with production, and some have safety committees of varying degrees of enthusiasm and efficiency. Our accident records are, in some cases, discouragingly high and in others, low. How, then, can we find common ground on which to stand?

It seems reasonable to start with what I believe to be an average condition, that is, a management convinced of the value of safety, realizing its relation to production and giving the necessary financial and moral support, overseers who believe that safety is a good thing and are willing to do what they can to help the work along provided it does not interfere with production, and a safety committee, interested in the meetings, ever ready to recommend guards and repairs but not particularly active in the spreading of safety propaganda or helping their fellow employees to work safely. With these conditions as a starting point, let us consider our plans for safety work.

First the manager, whose attitude and interest in safety is certain to be reflected in his overseers and assistants. Has he an active interest in the work and is he in as close touch with it as he should be? Perhaps not. Then what can be done to bring him in touch? Shall he attend the safety meetings? I believe very strongly that this should not be done, for it is my experience that a dumb committee is the result of the presence of those in high authority. I know of one plant where the safety committee was a failure due to the manager attending every meeting. After a time, however, he realized his mistake and withdrew, and I believe that at the present time the committee is functioning very successfully. I do believe that to have the manager give a short talk occasionally at the committee meetings is of great value to all concerned. I have in mind the occasion of a fire in our plant which was thought to have been due to smoking. The manager considered that this was an occasion when a short talk would not only show his interest in the committee but would show the committee that he recognized them to be the most effective means of preventing such fires. In our branch of the United States Finishing Company we have several customs which work out very well in keeping the manager in close touch. When a new member is appointed to the safety committee, the manager writes him a personal letter, outlining the duties and telling the man wha tis expected of him. When a member has served three months on the committee, he is given a certificate which is signed by the manager. The manager also reads the minutes of the committee meetings and signs his name as having noted them. Every lost time accident is reported to him on a form prepared for that purpose as promptly after the accident has been investigated as possible. The safety standing of our six plants is reported to him monthly and his interest is always keen to keep our plant at the top of the list. It seems to me that keeping safety in the mind of the manager fairly constantly is extremely important, for we who work at safety every day sometimes get to the point where we "can't see the forest for the trees" and his broader outlook is always very valuable.

Second, what can we plan for the overseer, the backbone of the company? They must be made to realize that lost time accidents mean loss in production and that they, being responsible for production, must take an active part in preventing accidents. They must be given to understand that no overseer worth the name will allow unsafe conditions to exist in his department. Our manager occasionally sends out letters to the overseers on the subject of safety and I quote the following from one of these letters: "Carelessness that might lead to accident is looked upon in the same light as the careless use of machinery and equipment and the accident record for your department is taken into account in our judgment of your ability to manage your department." Overseers associations or monthly meetings are excellent opportunities to reach them and give chances for not only safety talks by the manager or head of the safety work but for discussion of safety in connection with the regular production problems. Departmental safety standing posted on the bulletin boards sometimes helps by creating a spirit of competition but my experience with this plan is that overseers in whose departments the work is necessarily of a more hazardous nature than others, feel that they are under too great a handicap and the resentment of injustice more than offsets the value. I do not believe in having overseers attend safety committee meetings but we do have one assistant overseer or second hand present at each meeting. These men, being in particularly close touch with new employees, are impressed with the necessity of instructing them in the particular

(Continued on Page 14)

ABOUT LAPS

by Chas. E. Carpenter

THE lap is supposed to be the weakest point of the belt.

And yet when a belt is subjected to tensile or abrasive tests, the lap usually shows up to be the strongest. In fact, I never yet saw a properly made belt break at the lap under tensile tension.

Back in the days when no one seemed to know any better, all laps were reenforced, usually with copper rivets. But later it was discovered that a copper riveted lap lasted a shorter time than a lap which was merely cemented and not reenforced. The reason that the copper riveted lap showed shorter life was merely because with each contact with the pulley, a blow was exerted wherever a condition of unevenness occurred in the belt. This belt in turn exerted a force which drove the harder copper rivets through the softer leather. It is precisely the same principle as is demonstrated by the use of metallic belt fasteners. One can readily imagine the resistance offered by several ounces of rivets in a lap as it hits the pulley and how a continual hammering of such a lap is certain to bring about evidence of premature wear.

Now what is true of a riveted lap is more or less true of a cemented lap. If the cement be of the rigid sort, such as most good belt cements are, then the lap will be stiff and rigid, or less flexible and supple than the other parts of the belt. Consequently, every time one of these rigid laps strikes a pulley, the force of a blow is exerted and the rigid leather must take the force of the continual hammering. Inasmuch as a rigid lap resists bending and belt creep is largely due to the belt resisting bending, there will of course be more belt creep with a rigid lap than with a flexible lap.

All good glue cements make rigid laps. The stronger the cement the more this is true. Practically all regular vegetable tanned leather belting is made with glue cement.

VIM Leather Belting of all varieties, is cemented with a celluloid cement. Properly used it is more adhesive than glue cement and it is many times more flexible.

The flexibility of VIM Leather Belting laps is best illustrated by the recital of an incident which occurred some few years back.

The VIM Leather Shop was visited by a prominent English engineer and a wager was laid of dinners for six, that he could not take a roll of VIM Leather Belt from stock, he to pick the roll himself and then when blindfolded, locate half of the laps by feel. He succeeded in locating less than 20% of the laps and afterwards admitted that even those he located by feeling the joint of the leather, rather than by the rigidness of the lap.

The popularity of VIM Leather Worsted Aprons is due to the magnificence and suppleness of the lap and it is made precisely as is VIM Leather Belting.

The VIM Belt Lap is merely one illustration of the thoroughness with which the Houghton Research Staff has been studying the belting problem for 30 years.

The research work which the Houghton Research Staff has done on belt cement and belt cementing could not have been more complete and satisfactory.

Complaints of belts coming apart at the lap are a part of the leather belting game and will always be with us, but while complaints in this respect concerning VIM Leather Belting were never abnormal, since the Research Staff has finished its work, they are unusually few. About 10% of what we formerly considered normal.

So why not try just one VIM Leather Belt?

North Carolina Mill Statistics

Raleigh, N. C.—Holding its position as one of the greatest cotton products manufacturing States in the Union, North Carolina during the biennial period which will end January 1, 1925, has forged ahead in every department of the industry, according to the biennial report of the Department of Labor and Printing which is being prepared for presentation to the Legislature on that date. Mitchell L. Shipman, commissioner in charge of the department, made public the figures which he has amassed on the cotton industry touching every phase of the matter and which will be included in his report to the General Assembly.

North Carolina, as heretofore, according to the digest of the various charts prepared by Mr. Shipman and which will constitute Chapter one of the 34th report of the department, ranks first in the South in the cotton industry and second in the Union, being led by Massachusetts alone. However, during the past year North Carolina has passed both South Carolina and Massachusetts in the number of active spindle hours. This, however, is a variable from month to month and the three States have alternated for the leadership from time to time. Spindle hours, according to Mr. Shipman's report, are determined not only by the number of spindles but by the activity of these spindles over a given period. During the past year, at times, though North Carolina has a lesser number of spindles, it has led in spindle hours, indicating that the State's mills have been operating on a basis nearer to full time than South Carolina and Massachusetts, meaning that the activity has been in a healthier state in North Carolina and that more work has been furnished cotton mill employees.

Development Continues.

Indicating that the tremendous development of the industry which has taken place during the past ten years has not ceased is the fact that there was an increase in the number of mills during the biennial period, there now being 386 operating within the State. Mr. Shipman regards this as a significant fact because during the period there were consolidations in two or three cases where a number of mills were merged into one.

During the past two years, States Mr. Shipman, the capital stock invested in the mills also has increased $168,292,542 representing the investment in the industry at the present time, a clear increase of close to twenty millions in the past year.

In every other line of the industry there have been increases, according to Mr. Shipman, who made a careful survey and investigation of the entire situation before writing his report. In addition there has been a decrease in the number of children employed in the mill. At the present time there are 4,772 children between the ages of 14 and 16 employed in mills.

Spindles have increased, looms, cards, horsepower employed, raw materials used, value of the yearly output, number of employees — all these show an increase over the last biennial period and also over a year ago, according to Mr. Shipman. Another fact of interest, he says, is that the average wage scale for the period is higher than that of two years ago.

North Carolina leads all the States in the number of mills, is second in the number of spindles, second in value of products, second in value added by manufacture, and second in number of wage-earners employed. The State is first in the manufacture of numerous articles of the cotton trade, however.

Following are some of the outstanding paragraphs from Mr. Shipman's report:

"The State of North Carolina retains its position as the greatest cotton goods manufacturing State in the South and ranks second in the Union. But North Carolina has a greater number of mills than any other State, and the number of mills in active operation has increased during the biennial period, though there have been consolidations which have absorbed into one, several of the mills. There are now 386 active cotton mills in the State

"The industry may well be called the State's greatest, so far as manufacturing is concerned. The number of wage earners, the amount paid in salaries and wages and the value of products is greater than any other and these figures have increased during the biennial period.

"With $168,292,542 invested in the industry the State takes its place as a Southern leader and second in the National list. Five million nine hundred eighteen thousand, five hundred thirty-eight spindles are employed in the industry, but during the biennial period from time to time a greater number of spindle hours has been recorded for North Carolina than any other State, indicating that the industry has been and is in healthier shape and has a more constant activity than it enjoys in other States. This is a significant fact, for North Carolina ranks second to Massachusetts in the number of spindles. Nevertheless, cotton mill workers have enjoyed more prosperity than those of the New England States, because of more constant employment.

"The number of looms used in the industry is 83,402, and the number of cards, 15,494, both figures showing substantial increases. The use of horsepower has also increased 241,024 units now being used.

"The annual number of pounds of the raw material used by the North Carolina mills is 553,085,685, and the value of its yearly output is $252,078,364.

"But even as the industry itself has prospered so have those employed prospered. There are now 48,609 men, 30,347 women, and 4,772 children employed by the mills. The first two figures indicate increases, the last a decrease. The children employed are between the ages of 14 and 16 years. The average wage scale for this period was increased over that of two years ago.

"The State leads all others in the manufacture of denims, canton flannel, flannelettes and blanketings, towels and towelings, wash cloths, bath mats, wiping and polishing cloths (except pile fabrics), cotton table damask sheets and pillow cases and commercial yarns.

"It is second in the manufacture of tobacco, cheese, butter, bunting and bandage cloths; ginghams, shirtings (not silk striped); ticks, blankets and cotton waste for sale.

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Planning for Safety

(Continued from Page 10)

hazards of their work. We are, however, planning a general council in which the management, overseers and workmen will all be represented. It is our custom to have overseers report to the manager, on a form prepared for that purpose, every lost time accident which occurs in their departments This report is in detail and there is a space headed: "I would suggest the following to prevent the occurrence of a similar accident in the future." The value of reports of this nature is, I think, obvious. It is up to the safety man to study and know the overseers, to consult with them and seek their advice on all safety matters connected with their departments before acting and, by personal contact, to try and strengthen the weak spots for, just as surely as the manager's attitude is reflected in his overseers, so is that of the overseers adopted by the employees.

Third, the safety committee. I wonder if any of us have not had, at one time or another, the feeling that, in spite of our efforts, the interest at committee meetings was lagging and the members becoming indifferent. The safety committee has so far proven its value as to become indispensable in the safety campaign and when such conditions seem to exist, it is indeed time to get very busy and to do some real planning. In the first place, give the members some definite duties and responsibilities, however small, and if they already have some, then give them some more. There is nothing that brings out what is in a person any quicker than work to do and responsibility for its being done. Then, if there is any "advance tip" or "inside dope" such as wage adjustment, plans for an outing or any new buildings or changes planned, let the committee have it just a little ahead of the rest of the employees, for it gives them a little distinction which will mean a great deal. If the meetings have gotten into the rut of reading the minutes, safety standing, report of recommendations, accident reports and a few comments by the chairman, it is time to run in something new. Teach the prone pressure method and have everyone practice it. A large number of our accidents were caused by improper lifting and now every member of the safety committee is taught the proper way to lift and practices lifting an object in the wrong as well as the right way at the meetings. Insurance companies are realizing more and more the need of spending more time and effort in safety education and your insurance company will be glad to send a special speaker to address the committee. What other plants in the company or companies in the same line of work as your own are doing is always of interest to the committee. In our company, any peculiar or serious accident in any branch is at once reported to the other branches and talked over in the committee meeting which not only allows us to profit by the experience but also gives the members a chance to pass along some "inside dope" on safety to their fellow employees. There is one more point which, in view of the ever present argument for and against safety cartoons, I am a bit skeptical about metioning and that is humor at the meetings. If you have in your organization an employee with a keen sense of humor, why not have him on the committee? We found such a man at one time and he was retained on the committee for over a year because, together with his sense of humor, he had a great deal of real common sense and a keen interest in safety. He was a valuable member. I will admit that there is some danger in this plan but I believe that the chairman can easily regulate it and draw the proper line between humor and ridicule. And safety is certainly firmly enough established and proven to bear some humor. We must impress upon the members that unless they are passing along the knowledge and ideas which they get and are trying to keep their fellow employees from getting hurt, they are failing in their duty as safety committee members and also that the greater part of the success of safety work is up to them.

In regard to the employees in general, there is no end to the ways and means of getting safety to them. I believe that perhaps the most effective way to impress safety upon the workmen is to keep before them the loss in wages resulting from accidents and to lay stress on what this loss will mean to them and their dependents. On the large sign board at the entrance to our plant which shows the safety standing of the several branches of the company, there is this sentence: "Because of accidents, employees of this plant have lost 183 days' pay this year." The figure is changed every month when necessary and we have found it to be of great interest to the employees. We also carry this idea along on the pay envelopes with a short paragraph printed on them headed: "Would you throw away this pay?" and in reporting loss of time from accidents, the figure is always presented in terms of loss in wages. The pay envelope is perhaps the employees' most vital spot and any appeal to him by that means will not be without results.

In our plant of 1,200 employees, our record to date shows a 60 per cent decrease in the number of accidents over last year and a reduction from 451 days lost in 1923 to 183 days this year and it may be of interest to know some of the plans that were carried out in effecting this reduction. Our accident records were analyzed and showed 90 per cent due to non-mechanical causes, so we spent the greater part of our effort in education and propaganda. Bulletins of accidents in our plant and also of our employees photographed showing such things as the proper and improper way of lifting batches and rolls of cloth, the right and wrong way of cleaning calender rolls, etc., were

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Practical Discussions By Practical Men

Poor Selvages and Poor Cloth in General.

There is no doubt that a poor selvage detracts considerably from the value of a piece of cloth. Very often the following remark is made: "Oh, that will pass." Not so; there is nothing that looks worse on the counter than a ragged selvage. It would be surprising to many people to know how much easier it is to sell cloth with a good selvage than with a poor one. A piece of cloth has been known to pass muster owing to the fact that it had a good selvage, and yet the body of the cloth was rough looking through faulty filling. However good the body of the cloth may be, if the selvage is poor then it all looks bad.

The sooner the fixer commences to give attention to the making of good, salable goods or cloth, the quicker will be the response from his employer to the effect that he recognizes the fact that he has men working for him who are able to think and plan to turn off the best of cloth and not go about his work in that careless, anything-will-do, fashion.

How is it that some mills have such good names that a person leaving after working there any length of time can work in almost any mill? The reason is, the cloth that is turned out by a mill of this kind is first-class cloth, and the working people must be in line with such a system or the mill could not have attained the fame it has. There is not any reason why any fixer, no matter where he works, should not always have the same reputation. If the shed is a trifle too small as the shuttle enters it has a tendency to twist the outside threads together and this defect will make a poor selvage. Also, if the shuttle is low at the back as the nose enters the shed, twisted threads will be the result. The wrong timing of the harness cams will cause a poor selvage also. The best time to set the harness for almost all cases is to have them level when the reed is about 1¾ to 2 inches to large shed will cause a poor selvage as it opens out the warp too much and causes the threads to spread out, making an open space between each two threads. Especially is this shown when a full bobbin is in the shuttle and when the filling is near the bottom of bobbin and a common result from this is that as the yarn passes through the temple the filling is broken, causing a hole in the selvage. When there is not sufficient friction on the filling, it is liable to curl up on the selvage.

When a new warp is put on, the fixer should reset harness temples and see that the filling change is in good order, that shuttle and the selvage trimmer is in good shape, also pickers and box fronts on both ends of lay, and test out warp stop motion, also let off and take up. This will prevent rowey cloth.

W. H. C.

Card Settings.

Editor:

Will you please find out through the columns of your magazine from some overseer of carding who is running 1¼-inch staple the following information:

Settings of beaters in picker room.

Speed of beaters in picker room.

Settings of cards.

Production of cards.

Settings of rolls on drawing, both front and back.

Settings of rolls on all fly frames, three processes.

Would also like to have the weight of laps, weight of card sliver, weight of drawing, and number of hank roving on all three processes.

NO. 32.

Will the Child Labor Bill Become Law?

Dear Editor:

I am a regular reader of the Textile Bulletin, and have been reading about the child labor law in the Bulletin and other papers, and I think it is getting time something should be done, when we have to have socialists to tell us how to rear our children. We are capable of looking out for our children and their welfare, and as true Americans, that is what we will do, and not ask the socialists to do it for us; at least that is my opinion.

This is a vision I have of this law if it should pass.

A grown young man standing around with his best clothes on, with a cigarette dropped out at one side of his mouth, watching his poor old father, maybe sixty or sixty-five years old, cutting cord wood, or maybe working in some factory, to buy this grown son of his cigarettes, clothes and the bread he eats, so he can walk the streets, and lay out at night, and learn how to drink, gamble and steal, which we all know leads to the doors of the penitentiary where Mr. Debs spends some of his time.

Surely there is no father or mother who wants to see their son behind prison bars.

CLAUDE JAMES.

Caroleen, N. C.

Carding and Spinning

By George M. Ivey

Copy Revised for Third Edition.

CHAPTER I

Cotton

It is not the intention of the writer to discuss this question exhaustively, as it is not in the province of this book. "The Student's Cotton Spinner," by Nasmith, devotes over 80 pages to this subject, and the reader will find it treated in a very interesting and instructive manner.

There are nearly fifty varieties of cotton, but in the United States very little attention is paid to this fact. An increasing amount of Egyptian cotton is used in this country, principally for making fine hosiery yarn. It is also found that Egyptian is an excellent variety for mercerizing and a good deal is used for this purpose.

On December 15, 1914, an order of the Secretary of Agriculture effected the establishment and promulgation of standards for the following nine grades of white upland cotton, the use of which was compulsory for future trading.

Middling Fair.
Strict Good Middling.
Strict Middling.
Low Middling.
Strict Good Ordinary.
Good Ordinary.

Both the length and staple are used in designating a particular kind of cotton, and we speak of inch and an eighth strict middling Mississippi cotton. Tinges and stains are terms frequently used in cotton reports, and usually belong under the lowest classification.

The grades mentioned above are for American cotton only, and for the United States only. The Liverpool Exchange has a different classification from this, and also a different one for Brazilian, Egyptian, or Indian cotton.

When cotton is spoken of in the cotton market, the Middling grade is meant, and the cotton contracts, or futures, call for this grade, although a better or poorer grade may be delivered at a proportionate price. As a matter of fact, however, hardly one per cent of the cotton bought and sold on the New Orleans or New York Exchange is ever delivered. At or before the time of delivery the buyer or seller simply makes good the difference between the contract price and the price then current. In other words, the transactions are gambling pure and simple, and without doubt these transactions are largely responsible for inflating the price of cotton. However, these contracts can be used for legitimate purposes. For instance, a mill man sells 100,000 or 500,000 pounds of yarn at a price he knows will bring him a fair profit at present price of cotton. He does not know, however, that cotton will remain at this figure, and to insure this profit, he must buy the cotton. Under any condition, and especially if cotton is 25 cents a pound, it would take an immense amount of money to buy the cotton, and a good deal to store and insure it. He can therefore purchase the cotton he needs for future delivery, paying only the nominal sum of $10 a bale. When the actual cotton is used it is generally bought at home, and the contract representing this cotton is sold at New York. While this method is legitimate, and presents many advantages, there is no denying that the ease with which a contract may be bought and sold is a temptation for speculation, which not many can resist, and on the whole, the method does more harm than good.

Ginning.—Briefly stated, a modern cotton gin consists of a number of circular saws, from 60 to 90, about 10 inches in diameter, all on one shaft. These saws are about one-half inch apart, the space between them being filled by metal fingers. When the gin is in operation, the teeth of the saws, which are very fine, seize the fibers of cotton and carry the whole mass towards the fingers. These are too close to the saws to allow the seed to go through. The fibers are therefore torn from the seed, and are taken off the saws by a brush and blown to any convenient point. The cotton gin, except in matters of detail, is exactly what it was sixty years ago. If it had developed in the same proportion as other cotton machinery, the spinner would certainly have less cause to complain, for there is no doubt that the rough treatment cotton receives does the fibers great injury. Not only are they badly broken, but the shorter fibers are rolled in little balls, which it is almost impossible to get out, especially in long staple cotton.

Egyptian cotton, and the best Sea Island, is not ginned with a saw gin, but with what is known as a knife, or roller gin. In this process the fibers are held firmly by rollers and revolving or oscillating knives scrape the seed away. This is an expensive method, but incomparably superior to the other.

CHAPTER II

Opening and Picking

Strictly speaking, ginning is not considered a part of cotton manufacturing, although many mills in the South operate gins in connection with their mills. The first process which claims our attention is opening. In the United States this is generally done by hand. The bagging is removed

from the bales, perhaps a dozen at one time, and the cotton is piled in successive layers until the whole has been distributed. Other bales are then opened and piled on top of the first. It is considered good practice to open as many as the space will allow, and to feed from the face of the pile rather than from the top, so as to get part of each bale. This practice is of much more importance in England than in this country, for here we are much more likely to get a large quantity of cotton from the same locality, and possessing practically the same characteristics; but even here there are advantages derived from this method. It has become the custom in recent mill construction to have the opening room in the cotton warehouse, and blow or rather suck the cotton to the mill building. This saves hauling the cotton to the mill, and has other advantages, especially for a large plant. For a small mill, or one on fine numbers, and therefore using but little cotton, it is of no practical benefit, as it requires the attention of two men where only one is needed by the old method.

In England the common practice is to use a bale-breaker for opening the cotton. This is a machine with four sets of large rollers with very coarse flutes, or short spikes. The cotton in large armfuls is fed to the machine, and as there is a draft, of say, two, between each set of rollers, it is thoroughly torn up by the time it gets through. There is now an improved bale-breaker on the market, which thoroughly opens up and airs the stock. The machine is equipped with an apron upon which the cotton is placed directly from the bale. Alternate layers from several bales are fed at the same time in order to obtain a thorough mixing. One of these machines can easily open from 10 to 60 bales per day.

The common practice now is to deliver the stock directly from the bale breaker to the opener through a conveying pipe.

Openers.—A great many mill men are not so young but that they remember when cotton was fed entirely by hand. The lattice was marked off in sections of a yard each. A man would weigh a pound of cotton and distribute it as evenly as possible on this yard. While it was being fed he would weigh another pound, and so on indefinitely.

A machine used by many mills is an opener with a horizontal beater. An automatic feeder is employed in connection with the opener. It must not be taken for granted that because this machine is automatic, it will feed a uniform quantity regardless of the amount the hopper contains, and it is best to keep it from one-half to three-quarters full.

Perhaps the most improved and modern type of machine is the vertical opener, which provides very thorough cleaning without injury to the fibres. The stock is carried over a large grid surface by a conical cylinder which revolves about 800 times a minute. There are three methods of varying the amount of cleaning: by adjusting the grids, by raising or lowering the cylinder through means of adjustment provided, and by varying the speed of the cylinder. The cotton is fed at the bottom, and is withdrawn at the top. Most of these openers are equipped with apron delivery.

The stock from the opener in some mills is delivered through an automatic cleaning trunk to what is known as an automatic distributor, which deposits the cotton in the hopper of the automatic feeder—an ordinary conveying pipe is sometimes used between opener and automatic distributor. The automatic feeder delivers the stock to the breaker lapper regularly, so as to produce an even lap. It is customary to have three of these lappers, known as the breaker (a misleading term), intermediate and finisher. In some cases the intermediate is being omitted, and in all cases where extra long cotton is used, as the less this is beaten the fewer fibers are broken.

TROUBLES ABOUT THE PICKER ROOM

Split Laps.—One cause of split laps, where the trouble occurs occasionally, is too much waste in the mixing. This waste having been worked, has had the fibers all straightened out, and therefore there is not the same tendency to stick together as in raw cotton. Experience has taught us that where the mill is large enough to produce waste in sufficient quantity, it is best to run it separately and make laps of it. One of these waste laps is put on the apron of the intermediate, and the four laps run while this one is on the machine, containing one-fourth waste, are laid aside, and only one at a time is used on the finishing lapper. The resultant laps have only one-sixteenth waste, or 6 per cent. By using this we know that the waste is evenly mixed, and we do not know if it is put in the mixing haphazard. In many mills waste is never used in the mixing for warp yarns, but for the filling only.

Another cause of split laps is too much friction on the horse-head. This may occur on account of the weather, or the picker-hand may put soap or belt grease on the friction strap in order to make a nice, compact lap.

Probably the most fruitful cause of split laps is that the suction through both cages is equal, or nearly so. This causes the cotton to be matted in two sheets, with very little to hold them together. The remedy is simple. All modern lappers have dampers, so that the draft from each cage may be regulated. Arrange these so that the greater part of the draft is from the top cage, and the defect is generally overcome. Sometimes a careless operator allows the cages and air passages to become choked with waste or sand, and the draft not operating properly, trouble results. Occasionally the same trouble occurs by the air pipe leading from the fan becoming choked, and as they are often hard to get at the trouble is consequently hard to discover and remedy. There is a certain patent arrangement by means of which tongues of leather or tin are

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Strength of Cotton Yarn and Thread

WHATEVER strength any pure cotton yarn possesses, it can only be derived from the strength of the substance of the individual fibres. Individual cotton fibres are all of a comparatively short length. If a body made up of such fibres is held between two points which are at some distance from one another which is greater than the maximum length of the fibres, then they will not hold together unless there is something which binds them together, says H. Eigenbertz, in Textile Recorder.

The thin web which the doffing comb takes off from the doffer of a card holds together chiefly by the natural convolutions of the cotton fibres, aided by the crooked position into which the fibres have been pushed by the quickly-revolving main cylinder of the card whilst depositing them on the slowly-moving doffer filleting. (The proportion of fibres deposited on the doffer and the proportion left in the cylinder clothing are quite immaterial in this respect.)

As the web is consolidated into a sliver between the calender rollers of the carding engine, the natural convolutions of the fibres still form the mainstay and backbone of the card sliver.

When the sliver has undergone some drawing frame passages, the fibres will have been straightened out, and the compression of the sliver by the heavy calender rollers of the drawing frame must be relied on to interlock the natural convolutions of the cotton fibres which have assumed a practically "parallel" position with regard to each other. It is clear that in such a position intermeshing of the fibres is not possible to anything like the same extent as in the case of the card sliver, and the result is apparent in the comparative weakness of drawing frame sliver and its low resistance to tensile strain. The effect can be easily demonstrated by comparing the sliver of the several heads of the drawing frame—the drawing frame sliver becomes weaker and weaker as the number of passages increases, so weak indeed that certain classes of cotton do not allow more than two drawing frame passages.

When the sliver is passed through a combing machine, the state of parallelization is still more accentuated, and the fibres have so little hold on each other that the sliver from the combing machine often shows very little resistance to tensile strain, being easily drawn asunder.

When the sliver emerging from the last passage of a drawing frame or from a combing machine is attenuated, the natural convolutions of the cotton fibres will no longer suffice to hold the thin sliver together, and some other methods must be resorted to to make the fibres adhere together. The card sliver, with its superior strength as compared with drawing frame sliver, shows us the character of a method which will render the fibrous body self-supporting. If the fibres were taken from the main cylinder of the carding engine in the "parallel" state in which the cylinder takes them over from the flats, the thin web taken off by the doffing comb could not possibly hold together in the way it does, but we have seen that the swiftly moving main cylinder pushes the fibres into the doffer clothing in such a fashion that they assume a crooked position, and the fibres are thus forced to become entangled to a certain extent. It must be borne in mind, and we therefore repeat that the enfanglements of the fibres form the mainstay of the web as it leaves the doffing comb. This can be easily observed when closely examining the web of any card—the fibres do not lie in the "parallel" direction which is often thoughtlessly ascribed to them, but they lie in every direction indiscriminately.

In the slubbing frame (as the first machine which attenuates the drawing frame sliver to any appreciable extent) we entangle the fibres artificially and systematically by "twisting" them together. The twist which we give to the sliver interlocks the natural convolutions of the fibres. What is true of the slubbing frame sliver is true to the subsequent stages of sliver and yarn. In the yarn, the outside ends of the fibres have no holding power whatever—the fibres can contribute to the strength of any yarn (or thread) only where they are in some way held at both ends. This can take place only over a limited fraction of the total length of any fibre, and those parts only can contribute to the strength of the yarn.

The superior strength of a doubled and twisted yarn is chiefly due to the fact that a great percentage of the fibres is so securely held over a great distance of the total fibre length that only the very extremes of the fibres fail to contribute to the strength. That is the reason why in many-corded threads the highest percentage of the strength of the fibre substance can be utilized. The utilization of 100 per cent of the strength of the fibre substance is obviously impossible, since we have no cotton fibres of indefinite length, nor could we even get the strength up to 100 per cent of the strength of the fibre substance, unless we get all the fibres of indefinite length, also at the same tension, elasticity and other physical features. The longer the fibres, the stronger we can get the thread, for there will be less fibre ends to detract from the utilization of a high percentage of the strength of the fibre substance.

In spinning (as well as in doubling) the twisting process consolidates the body of convolute fibres and brings a certain amount of pressure to bear upon the fibres in the core part of the fibre body, thus creating a certain amount of friction between the individual fibres besides the interlacing of the natural convolutions of the cotton fibres. The two factors combine together to the effect of preventing the fibres in the core part from slipping over each other when the fibrous body is subjected to tensile strain. But a great percentage of the outside fibres will also add to the strength by reason of their ends getting interlocked with the body of the fibres at some point or other. If the body of cotton fibres only receives a slight amount of twist, such as in the case of slubbing sliver with its low twist multiplier, the fibres will not have much power to hold together, and the body of fibres therefore offers little resistance to being pulled asunder, because the fibres will be more or less free to slip over each other (incidentally allowing the subsequent drafting operations). If the slubbing sliver is twisted rather hard, it will offer a greater resistance to being pulled asunder: it will become stronger, but it will at the same time prevent regular and even drafting on account of the irregularities in the disposition of the fibres in the bulk of the yarn, and on account of the convolutions of the fibres not intermeshing evenly. Furthermore, the forced drafting will "cut" the sliver at certain places and the draft will immediately creep into the "cut" places.

If we increase the twist, we create rather different conditions, insomuch as the effect of the friction in the core of the slubbing will preponderate over the effect due to the natural convolutions of the fibres. The pressure on the core will be exerted most evenly if we have a yarn of even thickness in diameter. In an uneven yarn, the pressure on the core will also be uneven, though the actual strength of the yarn will not vary to the same extent as the irregularities, because the twist naturally prefers to run into the thinner places, leaving the thicker places softer twisted. This can be easily proved by experiment, though it would lead too far to examine the matter in this place. So much may be said here, however, that the thin places being harder twisted will be comparatively stronger than the softer twisted thick places, thus incidentally demonstrating the impossibility of judging the "regularity" of a cotton yarn by any strength test; the difference in regularity will always be greater than the difference in strength and conversely—differences in strength will generally be a sign of still greater differences in regularity. Going further, we may say that the evenness of a yarn is so distinct from the regularity of its strength that neither of the two kinds of test can supplant the other. There are yarns where strength is of paramount importance, and there are others where it is second to evenness. In the first case, the strength test is the more important one of the two, in the other case the blackboard.

Reverting to the strength of the yarn, there are obviously two factors which are of the utmost importance, namely—(1) The strength of the "fibre substance," which varies with the strength of the staple, and (2) the amount of twist.

It is usually often cheaper to get the required strength by twisting, rather than by buying a longer and stronger kind of cotton, which statement brings us to the consideration of the useful limits to twisting. If a certain maximum amount of twist has been found to get the most out of the cotton fibre, then this limit should be respected. Of course, the limit may be variable under the aspects of giving due consideration to the preservation of a high degree of elasticity, or obtaining yarns of certain outstanding features. When all the points coming into consideration have been duly considered and respected, it becomes clear that it would be suicidal policy to use an expensive kind of cotton and putting in little twist where we could arrive at the desired result by using inferior quality of cotton and twisting more. Of course, in some cases the market may pay an extra price for an extra strong yarn or for a certain effect, such as for instance a yarn of high lustre which is brought out as much as possible by keeping the amount of twist down. Another consideration is the covering power of the yarn—twist reduces the covering power of the yarn, which is often of great importance in the case of yarn intended for weft in weaving, and also in other cases where the maker requires an "open" yarn. The mule allows spinning with softer twist without the precautions which are necessary for the purpose in ring spinning, and the mule also gives an "open and "oozy" yarn. The mule also allows spinning cotton yarns with little twist out of a low-class material. In fact, where mule yarn is used, it is often because it can be satisfactorily spun from any inferior quality of cotton, even if the yarn turns out weaker, if the goods require in the first line a satisfactory "cover" to be obtained.

In yarn intended for the weft of piece goods, the strength may count or it may not count, according to the kind of cloth required, but in many cases a so-called weft yarn is used for doubling purposes, and then the strength of the yarn is undoubtedly of great moment. In these cases the strength should be principally derived from the quality of the cotton, which in this case is an important point to note.

Yarn for doubling is generally required with "weft" or "doubling weft" turns, because the less amount of twist ensures a greater elasticity of the ultimate yarn. The difference in soft-twisted yarn for weaving and for doubling is therefore chiefly in the staple and in the strength of the staple; yarn for doubling generally requires good and strong staple, yarns for weft may be made of any quality and

strength of staple, according to the requirements of the cloth.

If any yarn is stronger than required for the purpose for which it is intended, it may usually be said that something is radically wrong, for it will probably mean that a raw material has been used which is too expensive, with the result that a neighboring mill may produce cheaper, get the business and pay the dividends. In other words, any yarn should, if possible, have the strength required—not less and not more.

For the best way to obtain a yarn of the required strength at the lowest possible cost the following chief items require careful consideration and study:

(1) The cost of the cotton, taking into account:

(a) The invisible loss caused by evaporated moisture;

(b) The impurities lost in the cleaning processes, by fly, etc.;

(c) The undesirable fibres which are got rid of by combing and singeing.

(2) The cost of the processes involved, taking into account chiefly:

(a) The amount of twist imparted to the yarn;

(b) Combing;

(c) Singeing (gassing).

This cannot be the place to enlarge on the influence and interplay of these varied items. The material is sufficiently important to form the subject matter of a separate study.

As regards the strength itself, it must be studied with regard to:

(1) The character of the fibres;

(2) The length of the fibres composing the bulk of the yarn (be it merely "carded," or combed, or "gassed");

(3) The structure of the yarn (single, doubled, cabled);

(4) The twist or twists (a single doubled or cabled yarns).

As we have mentioned already, the strength factor should receive particular attention in the case of yarns which are required for doubling purposes, and of these mainly those which are required for sewing cotton, fish netting, and some other kinds of doubled yarns. In all cases the "singles" of doubled yarns should not have more twist than that required to bring out the maximum strength obtainable in the finished "double yarn," for an unnecessary amount of twist in the singles would be unnecessarily expensive and serve no useful purpose; on the contrary, it might have a tendency to detract from the quality of the ultimate product. As a rule it will be found that yarns required for doubling should only have sufficient strength to hold the fibres well enough together to prevent them from sliding over each other when under tension. This requirement has led to the adoption of the twist standards known as doubling-weft multipliers. Real weft, as used in the manufacture of cloth, is spun more with a view to obtaining a "full" yarn for a good "cover" rather than a strong yarn, and, in fact, it is often much weaker. As it would be useless at the present stage to try setting up any standards for weak yarn, weft yarn, as used for cloth manufacturing purposes, will be left out of consideration in the remarks which follow.

All the strengths mentioned in the following pages refer to what would be judged by a doubler to be a yarn of good quality in the commercial sense of the word; the sense which, after all, is ultimately the principal one to be taken into consideration. The averages on which we base ourselves are those of lea tests and half-lea tests, for reasons which will also be carefully examined and explained. Inferior lots have been cut out when taking the averages, and so have lots which showed an extraordinarily good pull. The reason for the latter course is that if the tables are to have any value at all, they should, if possible, give averages of what might be called trade standards, thus showing what a yarn should "pull." In other words, an attempt has been made to show a way to the setting up of strength standards. Such standards may allow deviations in either direction for particular purposes. The author lays no claim to setting up any kind of standard himself. He only wants to submit subject matter which will be useful in setting up standards, a work which must obviously be undertaken by a representative body of manufacturers.

When examining and tabulating strengths of yarns, due regard must be paid to the "twist per inch." In the tables of the present article, mule and ring-spun yarns have received separate consideration, as also yarns with different degrees of twist. We repeat that in all cases yarn of good commercial quality has been exclusively considered, and that the "weft" yarns are such as would be suitable for doubling.

Before going into the details of the strengths as registered by various yarns, it will be necessary to say something about strength-testing apparatus, as there are two fundamentally different kinds of test—the lea test and the single thread test.

The lea test is only capable of indicating approximate figures, which can by no means be considered as real averages of the strength of the individual threads in the lea, nor even as averages of the weakest places in the yarn. When a lea has been wound on the test reel it should be 120 yards long. These 120 yards are divided up into 80 "threads" of 1½ yards each. For testing purposes this "lea of 80 threads" is laid over two hooks, and weight is gradually added to one of them until the lea is broken. The maximum weight registered is commonly known as the "pull" or strength of the yarn in the lea test. It may be well to examine the shortcomings of this kind of testing. First of all, a reliable test would

(Continued on Page 26)

Press Comment on Child Labor Amendment

Growing Usurpation.

There exists a strong public opinion, and it is growing stronger every day, which views the continued usurpations by the Federal Government of the rights and duties of the individual States as a direct menace to the perpetuation of that correct balance which must exist between the functions of each if the constitutional form of government under which we live is to be preserved in its entirety and pristine vigor.—Rev. Jas. H. Ryan, of Catholic University of America, in Current History.

Catholic Weekly Condemns Amendment.

Making an eighteen-year-old limit and putting it on the books as an amendment to the Constitution will, like prohibition, be one more deadly blow at local State government, self-government and individual liberty. It would be one more step in the general parade to obliterate the States altogether. — The Tablet, Brooklyn, N. Y.

An Apology for the Child Labor Amendment.

The first reason they give for the proposed amendment is that it is simply an enabling act. This is an apology for the amendment that is being reiterated over and over again by its sponsors and defenders. Of course it is an enabling act. That is one serious objection to it. It enables Congress to do things that the Constitution does not and should not permit it to do. It delegates a wholly undefined power that the makers of the Constitution scrupulously reserved to the States and to the people. — Springfield (Mass.) Union.

A Raw Affirmation of Incapability.

The whole proposal is founded upon an utterly indefensible fallacy. It is simply a raw affirmation that the people of the States are incapable or cannot be trusted to regulate and conduct their domestic affairs. The fathers of the Constitution thought otherwise. It is only comparatively recently that the uplifters have taught us that Ohio should see to it that Georgia runs her affairs to suit us. What Georgia or North Carolina does is none of our business. It is none of the business of the Federal Government.—Akron (Ohio) Beacon Journal.

Less Confidence in Congress.

It is a historical fact that the American people generally have always had more confidence in the court than in Congress. They have been right. Records of recent Congresses prove them right. It is not likely, for all the impassioned demagoguery loosed in 1924, that they will ever turn their backs upon court and Constitution and accept the radical proposal to make the 531 members of Congress into a composite King, with a swarm of selfish minorities as the power behind the Congressional throne.—New York Post.

Would Forbid Farmer to Employ His Children.

This (Child Labor Amendment) would mean that the farmer might be forbidden by a Federal law to employ his own children on his own farm and quite probably on the farms of his neighbors. This would not help the morale of rural life but merely interject another element of unrest and dissatisfaction through the meddling of another Federal bureau with the private business of the fathers and mothers of the country.—The Herald, Rutland, Vermont.

The Child Labor Amendment.

The proposed Child Labor Amendment to the Constitution, which is to be voted on at the November election, is not thoroughly understodo by most of the people. Great pains are being taken by advocates of this measure that no great amount of information is given out to the general public, because to do so would defeat the measure. There has grown up in this country in the past few years a great body of "reformers," or those who believe that many of the conditions of social life are wrong, that laws should be passed regulating or proposed to regulate all sorts of things; even that a man's morals should be scrutinized, as well as his habits, his likes and dislikes, and he should be compelled—by law—to live in a certain prescribed manner—this to be regulated by the reformers, without any regard to whether his daily wage or condition in life permits him to live in accordance with ideas and plans to be laid down by the reformers.—Portland (Ind.) Republican.

A Surrender of States' Rights.

It is difficult to visualize the state of mind which enabled a Representative or Senator in Congress to vote in favor of such a surrender of the rights of States and rights of the family as the Child Labor Amendment. That there was a feeling of revenge in some hearts, dictating a policy which was thought to reflect upon certain sections could be imagined, although this is not generous. Yet the knife cut both ways—and the Senator who would seek to thrust it between father and son and mother and

daughter in South Carolina, offered the knife also in New York and Massachusetts. The blade to represent Federal spies and mischief-makers; the family to be invaded anywhere and everywhere, and a Washington official to be declared dictator of the children of the nation! — Times-Union, Jacksonville, Fla.

Too Great An Authority.

Not only is there opposition to the idea of taking away the rights of the States and centralizing power in the Federal Government, but there is an unwillingness to confer such an authority upon Congress as is provided for under the proposed Child Labor Amendment. The broad and sweeping amendment doesn't mention children. By it Congress would be given "power to limit, regulate and prohibit the labor of persons under eighteen years of age."—Norwich (Conn.) Bulletin.

Opposed to Giving Power to Congress.

We are opposed to giving Congress any such power. Of late years we have seen Congress do some very foolish things when complicated by partisan or sectional prejudice. Frankly, we would not care to entrust this important matter of child labor legislation to such a Congress as we have had for the past ten years without some definite check on the part of the people.—Rural New York.

A Piece of Legislative Sentimentality

The proposed "Child Labor" Amendment to the Constitution is a piece of legislative sentimentality which appeals strongly to people who are controlled more by their feelings than by their reason. But the purest emotions are often most blind, and the following of them frequently leads to the defeat of the real object which excites them.—Fort Wayne (Ind.) News and Sentinel.

A Nation of Workers.

We are a nation of workers. With few exceptions the millions who are in the banks, in the pulpits, the offices of the great corporations, at the bar and in other places of responsibility, learned to work with their hands before they were eighteen. The millions of useful artisians in the skilled trades learned to do useful work with their hands when they were thirteen, or fourteen or fifteen, and before they were eighteen.

The boy who idles until he is eighteen has lost his chance to become a useful citizen. Abraham Lincoln, General Grant, Grover Cleveland, John D. Rockefeller, and all the host of the greatest men of affairs in the United States learned to work and work hard when they were children. Work did not destroy them. It proved them and made them.—Huntington (W. Va.) Dispatch.

Concerted Drive to Influence States.

That the Child Labor Amendment is not having the easy sailing the active supporters thought it would have is apparent from the call that they have sent out for a concerted drive to influence the States in favor of ratification. The need must be felt for quick action. It is evident also there is a fear that the public if given enough time will not evince a desire to approve an addition to the Constitution that should not be there.—Buffalo (N. Y.) Commercial.

Oregon Woman Flays the Sponsor of Federal Child Labor Bill.

"Babbling brooks are not always purling streams of water," says Dr. Mary Clancy Foye, of Oregon, "and there are any number of women and men, too, who can teach Old Faithful geyser how to spout, instruct the North wind in blowing, and Niagara how to roar—and all to no set purpose apart from raising Cain generally, sometimes for hire. The perfervid workers for more Washington bureaus, fat jobs and centralized government of everything down to dust-pans and scrub-buckets have been declaring that our very national life itself depends on the passage of the pending measure."

"I have kept quiet while I looked up State laws and dug out facts," says the woman doctor, "and I am now convinced that the most intense and intensive campaign of misrepresentation ever conducted in this country is this one in behalf of this so-called Child Labor Amendment. Why can't people tell the truth? These radicals, and other pests parading around, lying and arousing passions, and all so they may either run the country or sell it out, are misrepresenting things." "Mrs. Millie R. Trumbull has moved the compassionate Oregonians to tears as she pictured the plight of the little children in Texas."

"The truth is, Texas has for more than eight years prohibited — and enforced—employment in factories of any child under 15. Georgia prohibits factory employment of children less than 14, excepting by permits for orphans, or children of widowed mothers, and only 42 permits have been taken this year."

"Our American public should be warned against these hired talkers for bureaucracy. Our States are competent to handle their own problems, and many merely gaseous women traveling around retailing misinformation could do their country far more good by working off their surplus energy on the washboard. Ideals are all right when they are not the merely greedy ideas of some who hope to garner heavily at the public cost."

Catholic Observer Opposes Child Labor Amendment.

We are not in favor of the proposed Child Labor Amendment to the Federal Constitution for the reason that it would result in further unwarranted usurpation of State rights, the unnecessary curtailment of parental authority and responsibility by a Federal bureaucracy and the excessive centralization of additional power in Federal Government at the expense of local self-government.—Catholic Observer, Pittsburg, Pa.

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JUNIUS M. SMITH ..... Business Manager

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A Student of Economics

The Daily Argus-Leader.
Sioux Falls, S. D.
Sept. 27, 1924.

David Clark, Esq.,
Managing Editor,
Southern Textile Bulletin,
Charlotte, N. C.

Dear Sir:

I am in receipt of your letter of the 25th. In reply I am enclosing a more recent editorial from the Argus-Leader on this subject of child labor, in which you will find the points you raise completely refuted.

I must say to you, as I have to Mr. Nathan B. Williams after further correspondence, that either you are the unfortunate victim of false and misleading propaganda or else you are yourself engaged in circulating such.

Very truly yours,
BRYTON BARRON,
Associate Editor.

Former Rhodes Scholar at Oxford, England and Research Student in Economics.

(Extracts from Editorial.-
Interests Misrepresent Facts.
(Daily Argus-Leader.)

One of the most flagrant cases of misrepresentation that has come to this newspaper's attention for some time is contained in propaganda literature sent out from the Washington headquarters of the National Industrial Council on the proposed child labor amendment. Included in this literature is a table concerning the "number and distribution by States, and by general divisions of employment, of children 10 to 14 years of age engaged whole or part time in gainful occupations throughout the United States." This table, which it is claimed is based upon the 1920 census, gives figures by States and according to classes of occupations for the number of children thus employed between the ages stated. According to the totals given there were 378,063 children between the ages of 10 and 14 engaged in gainful occupations in the United States in 1920, only 9,743 of which were employed in mills and factories, with the great majority of the rest merely children who were helping their parents on the home farm.

Table 3, on page 476 of this volume and table 17, beginning on page 519, reveal that the figures given in the propaganda literature are not those for children from 10 to 14 years of age, but instead are identical with those for a still smaller class, those from 10 to 13. Thus the propaganda figures give the total number of children "10 to 14 years of age" employed in mills and factories as 9,473, whereas it is that number 10 to 13 years of age plus 50,512 who were 14 years of age, or a total of practically 60,000—which is six times the figure the industrial propaganda gives.

Charlotte, N. C.,
Oct. 2, 1924.

Mr. Bryton Barron,
Associate Editor,
Daily Argus Leader,
Sioux Falls, S. D.

Dear Sir:

Yours of the 27th to hand, and I notice that you are a Rhodes scholar and a research student in economics, but I do not think you are entitled to make the latter claim, for you evidently make your statements without research.

You challenge the statement that the 1920 census showed only 9,475 from ten to fourteen employed in mills and factories, and say that the census shows that number to have been employed from 10 to 13. You did not continue your research long enough to notice that the heading said "10 to 13 **inclusive,**" which is ten to fourteen just as Mr. Williams said. In proof of this I enclose table put into the committee report by Miss Grace Abbott.

I will not accuse you of intentionally misrepresenting, but I am wondering if you are man enough and honest enough to come out in your own paper and state that you made an error in your editorial of September 26th.

In your previous editorial, you tried to discount the census figures by making the very foolish claim that January and February, 1920, were during a period of depression. They were months of the very highest industrial prosperity and the highest industrial profits. If it is necessary to convince a "Student of Economics" of that fact, I can send you the reports of the Federal Reserve Bank.

The advocates of the Child Labor Amendment are now loudly proclaiming that they have no desire to enact anything but the former Federal Child Labor Law which only prohibited employment under fourteen years of age in factories, and yet you include in your statistics all of those up to eighteen years of age, many of whom instead of being children are married people with children of their own.

Every statement made by Mr. Williams and myself can be substantiated.

You claim to be a student of economics and yet you base your arguments upon statistics of five years ago, whereas, there was a decrease of 71.2 during the previous ten years in the employment of young people in factories.

There are less than forty (40) children under fourteen years of age now legally employed in all the cotton mills in the United States. There are, of course, a few violations of the laws, as is always the case, but there are no more than would be the case under a Federal law.

With your desire to "pick the motes out of the eyes" of other States you are willing to see South Dakota forever surrender the control of its own children and place that control in an old maids' bureau in Washington.

I do not expect you to have the fairness to publish this letter.

Yours truly,
DAVID CLARK.

Where the Amendment Advocates Get Their Funds

A Northern lady driving to Florida in a fine car last Fall happened to notice two negro boys picking cotton near Camden, S. C., and was so distressed that she has given a large sum to assist in getting the Federal Child Labor Law Amendment passed.

The negro boys were happy and no one can show that they were injured by picking cotton, for about thirty days, but the dear lady with little knowledge of work was moved to tears and to generosity.

We would risk a good size bet that either of the negro boys at the age of 18 can lick any three of her boys if she has any. Probably she has only a poodle dog.

Securing Students Through Misrepresentations

WE are informed that a representative of the Extension Department of Chicago University is working the cotton mills of the South and in securing students for their correspondence course is stating that we have examined the course and advise mill men to take same.

His statement is not correct, as such investigation as we have made leads us to believe that the course would be of little value to superintendents and overseers, and we advise our friends not to subscribe for same. Chicago University is not in a cotton mill section and they have nobody connected with them that can be justly classed as a textile expert.

This is not the first time that salesmen have attempted to use our influence to secure business and we therefore advise our readers that when we endorse any proposition the salesman will always have with him a signed letter to that effect.

California and Its Child Labor

The great indoor sport in California these days is "picking the motes out of their neighbors' eyes," with special attention to the eyes of North Carolina and Georgia.

The press of California, with its "holier than thou" attitude, is accusing North Carolina and Georgia of all kinds of flagrant child labor abuse.

The fact that these two States have child labor laws that are strictly enforced makes no difference to the "mote pickers."

North Carolina has an adequate child labor law and enforces it to the extent of prohibiting child actors, but Mrs. Rhoda Rypins (name sounds appropriate) is raising cain in San Francisco because the Juvenile Judges will not fine the juvenile actors in California.

The Rypins lady says that the children sing such awful songs as "Last Night on the Back Porch," "Why Did I Kiss That Girl?" "If I Knock the L Out of Kelly," "Your Mammy's Goin' to Slow You Down," and "Does Spearmint Lose Its Flavor on the Bedpost Over Night."

With California admitting its inability to regulate its own affairs they should import some people with enough ability to govern themselves or else turn this problem over to Miss Grace Abbott, Chief of the Children's Bureau of the Department of Labor, and let her send out some old maids from Boston at the expense of the tax payers of this country, to manage the affairs of California.

All the same we would not mind hearing a few of those songs. The titles sound right good to us.

Southern Textile Association

THE meeting of the Southern Textile Association, to be held on Wednesday, October 22nd, in connection with the Southern Textile Exposition, Greenville, S. C., promises to be one of the most interesting and largely attended in the history of the association.

There will be two sessions, one on Wednesday afternoon and one that night.

One of the principal speakers at the afternoon session will be S. F. Fannon, of the S. F. Fannon Company, Boston, whose subject will be "The Seventy-five Cent Dollar." Another speaker whose name has not been announced will also address the afternoon session.

John Bancroft, of Joseph Bancroft & Sons Co., Wilmington, Del., will speak at the night session and will discuss finishing.

The meeting will be presided over by Marshall Dilling, president of the association.

Personal News

W. J. Fincher has become second hand in carding at the Ensign Cotton Mills, Forsyth, Ga.

Fred L. Hunt is now grinding cards at the Ensign Mills, Forsyth, Ga.

R. L. Hulsey, of Greensboro, N. C., has accepted the position of overseer carding at the Pomona Mills, of that place.

James B. Laughlin has resigned his position at the Dacotah Mills, Lexington, N. C., and is now located in Spartanburg, S. C.

D. F. Poole, of Greenville, S. C., has accepted the position of overseer weaving at the Morven Mills, Durham, N. C.

J. A. Spratman, of the Industrial Cotton Mills, Rock Hill, S. C., is now grinding cards at the Chadwick-Hoskins Mill No. 5, Pineville, N. C.

J. C. and D. C. Collier have sold their interest in the Carter-Collier Company, with knitting plants at Macon and Barnesville, Ga., and will retire from the business.

J. A. Cason, formerly secretary of the Collier Mills, will be general manager of the two knitting plants of the Carter-Collier Company at Barnesville, and Macon, Ga.

J. H. Laurens has resigned as overseer weaving at the Morven Mills, Durham, N. C., to accept a similar position at the Drayton Mills, Drayton, S. C.

Will Smith has resigned as overseer of the cloth room at the South Texas Cotton Mills, Brenham, Tex., to become assistant overseer of finishing at the Merchants and Planters Mills, New Braunfels, Tex.

V. C. Smith has resigned his position with the Gambrill and Melville Mills, Bessemer City, N. C., to become overseer weaving at the Southern Cotton Industries, Bessemer City, N. C.

W. A. Kennedy, of the Smith Building, Charlotte, N. C., Southern agent for the Root Company, Bristol, Conn., manufacturers of automatic counters, and of Fletcher Works, Inc., of Philadelphia, manufacturers of narrow fabric looms and extractors, has found it necessary to move into larger and more modern offices. He is now located at the newly completed Johnston Building, Charlotte, N. C.

J. W. Morris, formerly of Lynchburg, Va., has been added to the sales forces of John Campbell & Co., dyestuff manufacturers of New York City. He has been assigned to the Tennessee territory and will have headquarters at the Charlotte office of John Campbell & Co.

Lestershire Spool Co. Move Charlotte Office to Johnston Building.

The Southern offices of the Lestershire Spool and Manufacturing Company, in charge of E. L. Wooten, have moved to the new Johnston Building, having quarters at Room 519.

S. C. Thomas With Moreland Sizing Co.

S. C. Thomas has disposed of his interest in the Seydel-Thomas Company, of Atlanta, and has purchased the Moreland Sizing Company, of Spartanburg, S. C., of which he will be president. Mr. Thomas was with the Seydel Chemical Company for 18 years and is well known through the textile industry in the South.

New Stein, Hall & Co. Representative.

J. Frank Crawford, of Chicago, has accepted a position as salesman with Stein, Hall & Co., and will travel Georgia, Alabama and Tennessee, with headquarters in Atlanta.

Mr. Crawford is a salesman of long expreience and was formerly with Penick & Ford. He is originally from Texxas and traveled in that State for a number of years.

World's Cotton Consumption.

The total consumption of all cotton in the world for the year ending July 31, 1924, is set down as 20,234,000 bales as against 22,143,000 bales the previous year, and 21,162,000 in 1921-1922. The number of cotton spindles in the world is placed at 158,047,000 as against 156,576,000 a year ago.

MILL NEWS ITEMS OF INTEREST

Eufaula, Ala.—The Marcella Mills, which have been closed for some time, have resumed operations.

Macon, Ga. — The Carter-Collier Company has let contract to enlarge its building, including the raising of the roof.

Norwood, N. C.—The Norwood Manufacturing Company has install 24 new cards and one breaker lapper.

Honea Path, S. C.—The Chiquola Manufacturing Company has paid an extra dividend of ten per cent, in addition to the regular dividend.

Augusta, Ga.—The Augusta Factory will issue $500,000 in preferred stock and it is reported that the plant will be improved.

Macon, Ga.—The Manchester Manufacturing Company has resumed full time operations. A number of improvements have been made at the mill, including the installation of a new high pressure boiler.

Blacksburg, S. C.—The Blacksburg Spinning Company, formerly the Cash Mills, hvae let contract for humidifying equipment to the Bahnson Company, Winston-Salem, N. C. J. E. Sirrine & Co., Greenville, are the engineers.

Charlotte, N. C.—Recent sales of Page fence by the General Equipment Company, disrtibutors, include 6,000 feet to the Catawba Spinning Company, Mt. Holly; 3,000 feet to the Hannah Pickett Mills, Rockingham, N. C.; 2,500 feet to the Leak Manufacturing Company, and 1,000 feet to the Entwistle Manufacturing Company, also of Rockingham.

Porterdale, Ga.—The Bibb Manufacturing Company is making extensive improvements at their Osprey plant here. They have let contract to the Bahnson Company, Winston-Salem, N. C., for humidifier equipment which will be installed at an early date.

Bessemer City, N. C.—The American Utilization Company has been incorporated with a capital stock of $100,000 for the manufacture of products from cotton waste. R. G. Cherry and Frank Goldberg, the latter head of the American Mills, are the incorporators.

Macon, Ga.—The William Carter Company, of Needham Heights, Mass., has purchased all of the holdings of J. C. and D. C. Collier in the Carter-Collier Company, with knitting plants here and at Barnesville, Ga. J. A. Cason, formerly secretary of the Collier Company, will remain with the Wm. Carter Company as general manager of the two mills.

Bremen, Ga.—The Bremen Looms, Inc., have completed construction and are ready to begin operations. They have 65 looms for making novelty shirtings. R. A. Whatley is superintendent and manager.

Burlington, N. C.—The Burlington Cotton Mills, which has been under construction here for some months, has just started operations. Part of the machinery was moved from the Gastonia Cotton Manufacturing Company, Gastonia. The mill has an equipment of 10,080 spindles and 235 looms, making scrims and dobby fancies. J. Spencer Love is treasurer and manager.

Summerville, Ga.—The past year has been a prosperous one for the Summerville Cotton Mills, of this place, according to the report made to the stockholders and directors at their annual meeting here recently. After the meeting, the stockholders made an inspection tour of the mill, an annual event.

Among the shareholders who attended the meeting were Captain Charles A. Lyerly, L. L. Fisher, B. B. Davenport and W. H. Trotter, of Chattanooga, Tenn.; N. W. Sturdivant, of Atlanta; E. T. McGahee and T. V. Echols, of Rome.

This plant, operating approximately 15,000 spindles, and manufacturing duck, has been one of the most active plants in north Georgia during the past year.

Association of Colored Cotton Goods Manufacturers

PERMANENT organization of the Association of Colored Goods Manufacturers' Association was perfected in Greensboro last week, as briefly reported in these columns. The purpose of the organization is to secure and tabulate statistics of veery kind pertaining to the manufacture and distribution of colored cotton goods and to report such information to its members at regular intervals. Another object is to formulate methods to create an increased demand for goods manufactured by members of the association.

The management of the association is vested in a board of directors of eleven members, each of whom shall hold office for one year. Officers are elected by the board.

A resolution adopted at the Greensboro meeting said:

"The commission merchants, who are responsible for styling, are earnestly requested to give this matter their serious attention and are urged to develop more effective methods in creating original styles and in the quicker utilization of popular selling fashions in all fabrics which may be adaptable to reproduction and imitation on our colored cotton dress goods looms and that the secretary of the association transmit a copy of this resolution to each commission house representing members of this association.

A second resolution stated that the association was intent on keeping within the law at all times, and that a copy of each circular sent to members should be forwarded to the Federal Trade Comission.

The directors of the new association are: C. W. Causey, A. R. Howard, K. S. Tanner, Leroy Springs, T. N. Webb, T. H. Webb, J. L. Spencer, Chas. H. Haynes, Lynn B. Williamson, W. D. Briggs and Allen J. Graham.

Officers rae: J. Leake Spencer, Charlotte, president, and Jllen J. Graham, vice-president. A secretary will be selected at an early date.

The Greensboro meeting was attended in person or by proxy by members representing 31,500 looms. The mills represented were as follows:

Elmira Cotton Mills, Burlington; Eno Cotton Mills, Hillsboro; Camperdown Mills, Greenville, S. C.; Cliffside Mills, Cliffside; Stonecutter Mills, Spindale; E. M. Holt Plaid Mills, Burlington; Pomona Mills, Greensboro; Locke Cotton Mills, Concord; Holt-Granite-Puritan Mills Co., Haw River; Highland Park Mfg. Co., Charlotte; Anchor Mills Co., Charlotte; Caraleigh Mills Co., Raleigh; Bellwell Cotton Mills, Wilmington; White - Williamson Co., Saxapahaw; Belle Vue Mfg. Co., Hillsboro; Planters and Merchants Mills, New Braunfels, Tex.; Durham Cotton Mfg. Co., East Durham; Stevens Mfg. Co., Burlington; Cherokee Spinning Co., Knoxville, Tenn.; Victoria Cotton Mills, Rock Hill, S. C.; Lowe Mfg. Co., Huntsville, Ala.; Aurora Cotton Mills, Burlington; Deep River Mfg. Co., Randleman; Gibson Mfg. Co., Concord; Wennonah Cotton Mills Co., Lexington, S. C.; Texas Cotton Mills Co., McKinney, Tex.; Holt, Gant & Holt Cotton Mfg. Co., Elon College; McAden Mills, McAdenville; Industrial Cotton Mill Co., Rock Hill; L. Banks Holt Mfg. Co., Graham; Arista Mills Co., Winston-Salem; Leno Cotton Mills Co., New Orleans, La.; Trovora Mfg. Co., Graham; Tupelo Cotton Mills, Tupelo, Miss.; Sidney Cotton Mills, Graham; Glen Raven Cotton Mills, Glen Raven; Neuse Mfg. Co., Neuse; Griffin Mfg. Co., Griffin, Ga.; Lily Mills, Spray; Nantucket Mills, Spray; Roberdel Mfg. Co., Rockingham; Cornelius Cotton Mill, Cornelius; Brown Mfg. Co., Concord; Patterson Mills Co., Rosemary; Delgado Mills, Wilmington; Fort Mill Mfg. Co., Fort Mill, S. C.; Springstein Mills, Chester, S. C.

Social Workers Meet

Greenville, S. C.—The fall meeting of the Southern Textile Workers' Association of this zone will be held in Greenville coinciding with the Southern Textile Exposition, it was announced by L. P. Hollis, a member of the association and in charge of the arrangements for the entertainment of the visiting welfare workers. About 150 men and women from the adjacent section of the two Carolinas are expected at this meeting.

The officers of the association who will appear here are: Marion W. Heise, of Greensboro, president, and Mrs. Joseph W. Wray, of Gastonia, vice-president. A program is being prepared for the association by these officers working in conjunction with Mr. Hollis. It is understood that the work of the association will consist mostly of conference and instructive talks by leaders in the various phases of welfare work.

A feature of the meeting will be the tour of inspection through the various mill villages of Greenville, especial attention being given the program made by social workers of this vicinity. It is expected that the holding of the zone conference and the textile exposition at the same time and place will bring about a wider comprehension and a better understanding between all classes of mill employees and welfare workers.

English Textile Workers Emigrate.

London. — The president of the Textile Workers' Association, William Thomasson, discussing in Manchester the emigration to America of large numbers of textile workers, said that if, thanks to cheaper cotton, work came for all the machinery of Lancashire, there would not be enough labor to attend to it. Bad trade kept young people out of the factories, and emigration took away adults.

The Strength of Cotton Yarn and Thread

(Continued from Page 18)

require that all the parts of the lea are initially at the same tension, and that the end of the lea has been well tied to the beginning by means of a firm knot securing this thread at the same tension as all the others. This condition cannot be fulfilled in practice, so that it is easily possible that strong threads may break long before weaker places. The danger of irregularities in the tension is increased by the fact that generally a number of constituent parts are wound on top of others in the test reel, thus coming out slightly longer, and these parts may afterwards assume the lower positions in the strength test, throwing an excessive amount of tension on the other parts. It is very well possible that a number of the ends which were slightly shorter in the test reel will now come to lie on top of the longer ones in the strength tester, and this may be still more intensified by the curvature of the hooks.

It will thus be seen that it by no means depends on the strength of the yarn alone whether the weakest end will break first, or perhaps a part which may even be above average strength.

After this first uncertainty, we tumble against another one, for, as soon as one of the ends is broken, we do not test the average strength of all the ends any more, but rather the total strength of the remaining ends, and the "average" obtained is therefore misleading, because, instead of dividing by the number of the remaining ends, we divide by the total number of ends which originally constituted the "lea." In fact, the error is still greater than would appear at first sight, for as soon as an end is broken the tension on the adjacent parts of the lea is relaxed. It therefore needs no further explanation that the lea test will not show real averages, but rather distorted figures, which are more or less below the real average. If the first breakages of individual ends were always due to these ends being particularly weak, then the lea test would have at least the advantage of making a certain deduction in accordance with the irregularity in the strength of the yarn, or, in other words, the regularity of the strength would count for something in the lea test, for yarns of the same "average" strength would be valued more or less (at the strength tester) according to whether the yarn is very irregular or not: this does not seem to be the case, for we have seen that the first breakages depend to a high degree on quite fortuitous circumstances.

The strength indicated by the tester als odepends on another circumstance, namely, on the degree of regularity with which the tester is worked. If the tester is worked by hand, a certain degree of jerkiness cannot be avoided, thus tending to break the yarn sooner and to indicate lower figures than would be recorded if the jerks were absent. If a yarn tester is direct driven by a little electric motor, the records will not only be higher, but also much more reliable, and such tests will therefore be more suitable for purposes of comparison. Reliable comparisons also require the setting up of a certain standard testing speed, because the testers will not show the same results if worked at different speeds; yarns are obviously broken muc heasier the more quickly they are strained.

Carding and Spinning

(Continued from Page 17)

placed so as to almost feed into the bite of the cages. We fail to see, however, where the efficiency comes in.

Poor Help.—The troubles in many picker rooms are caused primarily by poor help. Many managers fail to realize the importance of this department, and think any green hand will do. In fact, it is usually considered the job for an unskilled man, and there are dozens of men throughout the country who apply for work, stating that they are picker-hands, who perhaps never worked a month in that department. On account of the isolated character of the work it is especially desirable to have a man in charge who can be relied on to tell the truth, and do what he is told to do without being watched. When a picker-man is told to weigh every lap and record the weight, also marking it on the end of the lap with colored chalk, many will do the recording all right, but will neglect the weighing.

Excessive Breakages.—As a breakdown in the picker-room often stops the whole mill, they should be especially guarded against. In this connection what is said above in regard to poor help is especially applicable. Breakdowns are caused by insufficient oiling and cleaning, over feeding, allowing the machine to run too long after being choked, machines out of level, or improperly balanced beaters or fans. A very frequent cause of breakdowns is not watching the gears closely enough, and allowing them to run without being in gear deep enough.

A beater which runs hot as the result of not being oiled, or from some unknown cause, can be frequently remedied by simply turning it end for end.

On the Atherton picker, the fast-running gear which runs the bottom cone frequently breaks or wears out, especially the intermediate gear. In an emergency a 1½-inch belt will do the work until a new gear can be secured.

Excessive Weight.—This is caused by having the grid bars set improperly. If they are set too far apart, or too far from the beater, the waste will be excessive. There may also be too great a space between the feed roller and the first bar. In setting the grids, always bear in mind that a system of grids could be devised so that there would be no waste at all. Also remember that if they are set too near the beater the fibers will be injured. The air flues may be choked with waste, causing back pressure, or there may be an insufficient area in the flues or chimneys. In either case the back pressure will force the good cotton through the grids into the mote box.

Fires.—Of course any one who works about a mill knows that fire is more likely to occur in a picker-room than anywhere else about the mill. For this reason all kinds of precautions are taken to guard against it. It is generally in the opener where the fire starts, but as it is directly connected with the next machine, it takes but a second to communicate to it. Where the pickers are in a separate room, the fire does little damage to them, although the opening room may be practically destroyed. The writer was once connected with a mill where fires occurred in the opener almost every day. The machine was carefully examined, and no hot bearings were found, neither was the feed roller too near the beater. It was finally noticed that occasionally sparks would be knocked through the grids. Although the beaters did not touch the rollers by three-eighths of an inch, they were separated still farther and the trouble was over. All this occurred a good many years ago, but a satisfactory explanation has never been given.

The chief trouble with fire is that if it does not get out of the machine, it melts the solder of the cages and chars and roughens the interior of the cleaning trunks. Often for hours, and perhaps for days, after the fire, the cotton is inclined to choke in the trunks. If they are not fireproof, it is sometimes desirable to make them so by lining with tin, lapped as on fire doors. Where the wood is charred, about the best thing to do is to make a brush of card clothing and scour it out, afterward using powdered soap-stone or graphite freely. When a fire occurs, it is not best to stop the whole machine, but the feed only, and the cotton is soon all burned out. If the machine is stopped, the screens are almost sure to be badly damaged. A chemical fire extinguisher is a valuable adjunct to a picker-room. A pipe for live steam with outside valve is more effective than many sprinklers, especially if the room can be tightly closed. This applies to the opening-room rather than to the picking-room proper.

In a mill where there is but one set of pickers, and the opener is put out of business several hours, or perhaps days, it is not necessary to stop the mill, for the cotton may be fed by hand to the next machine and the mill kept running.

Uneven Laps.—Years ago a lap which was within one pound of the required weight was considered near enough. Three years ago the requirements had become more strict, and laps that were over one-half pound out were run again. Now, in some mills, one-half pound is considered too wide a variation. If the machine is pushed for production, the light laps may be run at the same time as the heavy ones, and fairly satisfactory results obtained. The evening motion should be adjusted so that the belt is not in the center, but nearer the small end of the driving cone. It is probable that one lap on the apron may run out, but not at all probable that an extra one will be put on, and room should be allowed for the belt to shift enough to increase the speed of the feed mechanism in order to compensate for this loss. Assuming that the evener is properly adjusted to begin with, the lack of attention in the way of cleaning and

oiling will cause uneven laps sooner than any other cause. Pickers should be cleaned often, and the overseer should personally inspect them to see that it is done properly. The cages should be kept clean, or they will soon choke up around the ends. The apron must be kept at the proper tension, or it will sometimes slip and cause a thin place in the work. Another cause of uneven work is electricity. If it is present, it causes halts and dwells in the passage of the stock, and uneven laps are the result. The remedy is to have the room warm and sufficiently moist.

CALCULATIONS

The only calculations about a picker are draft, speed and production. Even these are not often necessary, as the pickers are always set with a draft of about four, and there is very seldom any occasion to change it. We might give the calculations necessary to calculate the draft, but do not think the benefit derived would compensate for the space required. The speed, too, is a constant factor, and does not need changing unless the staple of cotton is changed, as long-stapled cotton should receive more gentle treatment than short.

A calculation is often given to show the length of laps. We do not give it here for the reason that the calculated length is never the actua' length. There is a slight draft between the calender rollers, and the pressure tends to stretch the lap and make it longer. This stretch is not a constant quantity, but varies with the weight of the lap. It may be said in general terms to be from 2 to 4 per cent. Laps are usually made about fifty yards long, but it is best to unroll one and measure its exact length. This must be known at least approximately, in order to get the weight per yard, and this is necessary in order to calculate what the weight of the card sliver will be. If, for instance, a lap is 48 yards long, and weighs 36 pounds, or $36 \times 16 = 576$ ounces, one yard will weigh $576 \div 48 = 12$, and the lap is known as a 12-ounce lap.

When the laps are light it is desirable to have them longer than 50 yards, and by increasing the size of the knock-off gear, or decreasing that of its driver, this may be readily done. If the knock-off gear has 40 teeth, and the lap weighs 36 pounds, by changing the gear to 50 teeth, the lap will be one-fourth longer and weigh 45 pounds, but still be the same weight per yard. The machine will then run longer without doffing, and the laps will also run longer on the cards. Thus the production of the picker is increased, and to a certain extent that of the cards also, with less attention by the operative. Of course long laps are desirable under any condition, but if they weigh over 45 or 50 pounds, they are too heavy to handle conveniently.

Production.—The calculation for production is a very simple matter. We simply note how long it takes to make a lap, and the number of minutes divided into 60, and this quotient multiplied by the number of hours in a day's work will give the total number of laps that can be made. This multiplied by the weight per lap gives the production per day in pounds. Suppose a lap, weighing 33 pounds, can be made and doffed in 12 minutes. Then $60 \div 12 = 5$, and $5 \times 10 = 50$ laps per day. As a lap weighs 33 pounds, the daily production will be $50 \times 33 = 1{,}650$ pounds. If more production is wanted, and it is not practicable to increase the weight of the lap, it is an easy matter to increase the speed of the feed by using a larger pulley. For coarse yarns, one set of pickers should easily produce 15,000 pounds per week. The finer the yarn, the lighter the lap should be, and the smaller the production.

GENERAL INFORMATION

Pickers built in America are shipped to the mill set up in sections, weighing several thousand pounds each. If they are English machines, they are of course knocked down. These sections are assembled by a skilled machinist sent from the shop. A one-beater lapper will occupy a floor space of about 6½x16 feet and weigh about 8,000 pounds. A two-beater lapper occupies a floor space of about 6½x22 feet and weighs about 10,000 pounds. These machines are equipped with counter shafts which run 400 to 600 revolutions per minute. The receiving pulleys on this counter shaft are 16 to 18 inches in diameter, 5 inches face, tight and loose. The beater shafts run 1,200 to 1,500 revolutions per minute. Single-beater lappers require about four horsepower and two-beater lappers about eight horsepower.

(Continued Next Week)

Lancashire Cotton Outlook Reported Best Since 1920.

Manchester, Sept. 29.—Lancashire's cotton outlook is the best since Christmas, 1920. Many mills which have been closed for years are now reopening all machinery, expecting full time operation by December.

In Blackburn, Bury and Preston, big contracts are plentiful, with a shortage of weavers feared. Blackburn has 2,500 more looms running than in June. The decreased American crop is considered responsible for cotton being 14 pence instead of a shilling. Prospects nevertheless are the best in four years.

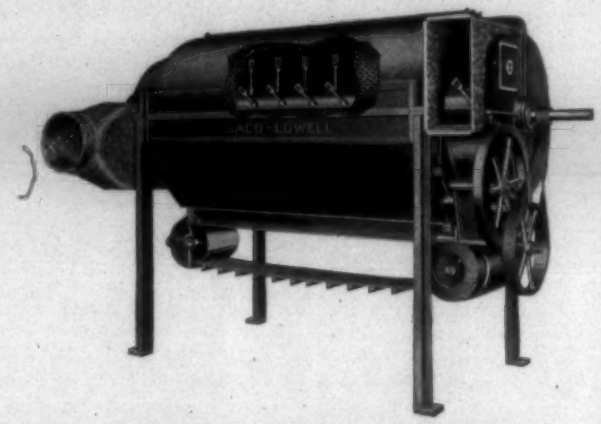
Dwight Manufacturing Company, Alabama City, Ala., according to an official of that plant, will continue their schedule of fice days per week. Attalla, Ala., Hosiery Mills are running five days, also Standard-Coosa-Thatcher Mills, Piedmont, Ala., will run full day and night shifts this week, as was last week.

Valley Waste Mills, LaGrange, are running 55 hours.

Saco-Lowell Horizontal Cleaner

In recent years there has been a tremendous amount of attention paid to opening and cleaning cotton. Many mills now have ideal opening rooms and have found that with modern opening equipment that they can greatly improve the quality of their product, using the same grade of cotton.

The Saco-Lowell Shops contributed largely to this advancement in American cotton mills when in 1915 they started building for the first time in this country, a vertical opener. Their vertical opener had many improvements over the vertical openers that some of our mills had imported from England. They now advise that they have over 1,100 vertical openers of their make in operation.



Saco-Lowell Horizontal Cleaner.

The machinery equipment for a modern opening room costs very little when you figure the number of pounds of cotton that an opening equipment will handle, and it seems that there is no department in a mill that will show better results for the amount of money spent.

There has just been issued a booklet describing the new Saco-Lowell horizontal cleaner. This cleaner forms a part of the conveyor pipe line between the vertical openers in the opening room and the condenser in the picker room. The cotton enters the horizontal cleaner through the inlet shown at the right of the illustration, and is drawn into the cleaner by the draft of air created by the conveyor pan in the picker room. The cotton is acted upon by a beater which is surrounded by a cylindrical grid. The grid revolves slowly and positively, using the same principle as a positive gear drive on a slasher. By this revolving grid, the waste is not allowed to collect in the top of the machine. It is brought down to a belt conveyor. From a belt conveyor the waste is dropped into a truck. This belt conveyor or apron cleanout is of such simple construction that it should not give any trouble and do its work effectively.

The Saco-Lowell Shops state that this machine does not take the place of a vertical opener, but should be used in addition. They say that in actual operation in a mill, they find that it takes out a great deal of waste, even after the cotton has passed through three vertical openers. Thsi waste contains practically no reclaimable material.

No additional labor is necessary to add this machine to an opening room equipment. Up to 30,000 pounds of cotton can be handled by this horizontal cleaner in ten hours, the makers say.

This machine is built entirely of metal, with the exception of the cleanout apron and the spacers back of the grid. The beater is mounted in ball bearings. The floor space or ceiling space required is 10 feet by 4 feet 4 inches.

Due to the fact that the machine can be mounted on the floor or ceiling, the machine can utilize space that might ordinarily be inaccessible. A machine of this kind might give a mill improved opening without building an opening room.

Further information can be gotten from any of the sales offices of the Saco-Lowell Shops.

Mill Industry Moving Upward

Richmond, Va.—Conditions in the textile industry have changed very little since the middle of August, but improvement reported during the latter part of the month has been maintained and has spread to some extent, according to the monthly review of business and agricultural conditions in the fifth Federal Reserve district, just issued by the Federal Reserve Bank of Richmond.

Operating time is said to have been increased throughout the district since mid-summer, and distinct gains in orders for textile products have been reported, but there is in no sense a sellers' market as yet and consumers still display caution in making future commitments, it is stated.

In sentiment the situation has changed much more than the actual facts indicate, it is added, and the pessimism that was evident throughout the textile industry three months ago has been replaced by a moderate but decidedly noticeable confidence in fall and winter prospects. Information at hand is said to indicate that the industry has begun an upward movement that will bring at least a moderate degree of prosperity to the mills.

Cotton consumed in the fifth district during August amounted to 140,710 bales.

SUPERINTENDENTS AND OVERSEERS.

We wish to obtain a complete list of the superintendents and overseers of every cotton mill in the South. Please fill in the enclosed blank and send it to us.

_____ 1923

Name of Mill _____

Town _____

_____ Spinning Spindles _____ Looms

_____ Superintendent

_____ Carder

_____ Spinner

_____ Weaver

_____ Cloth Room

_____ Dyer

_____ Master Mechanic

Recent changes _____

_____

_____

_____

Index To Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

Planning for Safety

(Continued from Page 14)

used on the bulletin boards. A special safety pamphlet and one containing safety rules of the plant were given to all new employees. Several special safety inserts were used in pay envelopes and signs at the employment office warned persons that unless they were willing to avoid injury and work carefully, not to apply for employment. Safety stickers were placed on employees' time cards several different weeks and larger ones were placed on or near every machine in the plant. Box trucks used for carrying cloth from one department to another were placarded with large safety slogan signs and others of these signs were placed in conspicuous places in the plant. Many other means were used which I will not describe, as I am sure they are more or less familiar to all, but our efforts were first to educate the employees in safety and then to keep it before them continually.

Some joker has said that the way to train a wife is to "Get them young, tell them nothing and keep them broke," and it seems to me that this may be revamped into the way to train a safe worker is to "Get them young, tell them all you can about safety and keep them interested." If this plan can be carried out systematically and consistently, we are bound to develop in our plants an organization of safe workers in whose minds and hearts is the real spirit of safety which is the ultimate goal of our safety work.

In closing, may I quote from an article by Arthur Williams, president of the American Museum of Safety and general manager of the New York Edison Company:

"The man who holds the most important safety job in America, and probably in the world from the standpoint of number of employees affected and money invested, has said that he would rather accept responsibility for accident prevention in a plant that did not have a single mechanical safety device, but where there was the spirit of safety among the workmen and managers, than in a plant where there was every known physical safeguard, but not this spirit of safety."

Philippine Trade Improves.

The Philippine piece goods trade is somewhat improved. Low prices at which goods have been offered have resulted in a greater volume of wholesale business, and retail buying is also more active. There is a good demand for grey sheetings, but stocks are adequate. Chinese weaves are still in control of the market, but in the lighter weights. American grey sheetings are beginning to compete successfully on a price basis. The price of 36-inch, 3-yard, 48 by 48 American grey sheeting from importers' stocks has advanced from 11.50 pesos ($5.75) last month to approximately 12 pesos ($6.00) per piece of 40 yards. Stocks of bleached sheetings are rather large in the lower grades, but the demand is fair. The price of 36-inch, 68 by 72, 4¾-yard goods from importers' stocks has declined from 11.25 pesos ($5.625) last month to about 11 pesos ($5.50) per piece of 36 yards. Stocks of all classes of drills are somewhat light with a seasonally good demand. There have been heavy imports of grey drills from Japan, and in the lower counts of colored drills, Japanese competion has become more pronounced. Prices of bleached drills have been slightly reduced, and the British are securing considerable business in this line. Stocks of American khaki are sufficient for the fair demand, while those of English wigans are rather heavy. The latter have been offered at somewhat lwoer prices, and a fairly good business is being done. There is little inquiry for denims, although stocks are light. Stocks of prints are heavy with a slack demand. Two-color, 24-inch, 56 by 44 prints with light grounds are quoted at 15 centavos ($0.075), and 3-color, 36-inch, 64 by 60 goods at approximately 27 centavos ($0.135) per yard. Chambray stocks are adequate for the demand which is seasonally good. Japanese goods are being offered on this market. Stocks of Swiss organdies and voiles are still heavy and the demand poor, but an improved inquiry for voiles is becoming apparent.—Cable from Assistant Trade Commissioner Edwin B. George, Manila, based on first-hand information received from the local trade.

Mill Employee Electrocuted.

Lenoir, N. C.—Charley Hindebran, 24, employee of Mill No. 2 of the Granite Falls Manufacturing Company here, was electrocuted at the plant.

He was trying to start a stalled suction pump when he was killed. There were no eye-witnesses of the happening. It is thought that dampness might have had something to do with the cause of his death.

French Manufacturers of Artificial Silk Fear German Competition.

Although the French manufacturers of artificial silk are still doing a good business, fears are expressed by the French press that artificial silk from Germany may compete with the French product unless care is taken in drawing up the commercial treaty with that country. It is pointed out that Germans are producing it at a lower price than manufacturers in France, Acting Commercial Attache J. F. Butler, Paris, reports.

What You Will See At The Exposition

(Continued from Page 9)

compiled catalogs giving the clients all the necessary information of their products. Original data sheets and reports of tests recently conducted by the steam engineering department of the Massachusetts Institute of Technology will be open for inspection.

Howard Bros. Mfg. Co.

Howard Bros. Mfg. Co. will have their special railing and machine running 500 teeth a minute, an exhibit of heddles and a complete line of card clothing samples. The exhibit will be in charge of their Southern salesmen, E. M. Terryberry and Guy Melchor. Phil Marsden, factory superintendent, will also attend.

Textile Finishing Machinery Co.

This company expects to have an unusually interesting exhibit for any one interested in cloth or yarn finishing. They will have some of their machinery at their booth and a "few surprises" for those who call.

Publications.

The following trade publications will have booths at the Southern Textile Exposition: American Wool and Cotton Reporter, Cotton, Fairchild Publications, Southern Textile Bulletin, Textiles, Textile American, Textile World.

American Tool Works Co.

This company will show 1 18"x12' motor driven lathe. The special features to be shown on this lathe are the new motor drive, which is self-contained in an enlarged leg underneath the headstock. The motor driving this machine will be a new General Electric, Type FT self-starting motor, 7½ H. P., connected to the initial drive shaft of the head by a silent chain. The machine will also be equipped with a "Westcott" spur geared scroll chuck, of the combination type. The machine itself has twelve spindle speeds, is pump-lubricated, and can be started and stopped from apron without leaving a working position.

The next machine that they will show will be a 2½" radial drill. This machine will be demonstrated largely on tapping work to show how conveniently and quickly this can be done by machine.

The next machine which they will show will be one of their 24" shapers with plain table and vise. This machine will be demonstrated on straight cutting and also on key-waying a shaft 3½" in diameter which will be passed clear through the machine, extending to the front and back, showing how easy it is to key-way a shaft of any length in a shaper which has provision made for this operation.

The fourth machine will be an Oliver-Twist grinder manufactured by the Oliver Instrument Co., at Adrian, Mich. This twist drill grinder has the unique advantage of grinding a twist drill with the same angle of clearance from the drill point to the periphery of the drill.

Powers Regulator Co.

This company will feature a demonstration of the Powers slasher cylinder temperature regulator. They were among the first in the field to successfully apply thermostatic control to the drying cylinders of slashers. We now learn that others in the field are attempting to do this, but that they are using compressed air operated regulators, which are more difficult and expensive to install than our device which gives just as accurate control, costs much less, is more rugged and durable, and is self-operating, requiring no complicated piping and compressed air supply. This device is described on the attached printed matter.

Besides this instrument, they will show about 12 of the more than 35 different devices which they have perfected to automatically control temperatures and pressures of liquids, gases and air. They will show their regulators which are being used on size boxes, size storage kettles, dye machines, bleach tubs, mercerizing, drying processes, piece dye kettles, yarn and skein dyeing kettles, thermostats to control temperature of workrooms and offices, wool scouring bowls, and many other processes.

Westinghouse Lamp Co. Exhibit.

The Westinghouse Lamp Co. will occupy Spaces Nos. 302 and 303, where they will have a complete line of incandescent lamps used for the lighting of textile mills and industrial plants. They will also show shadow effects produced under clear lamps and their elimination by the bowl enamel lamp. A representative line of the Westinghouse cutter reflectors will be displayed, showing the complete process of manufacture. Lighting and engineering information concerning the application of lamps to industrial plants will be given by their engineers who will be in attendance at the booth.

The display will be in charge of R. B. Ely, sales promotion section, New York, and Ralph Everson, manager of Atlanta territory.

Chas. A. Schieren Co.

This company will occupy Space 709 in the balcony, and their exhibit will consist of a number of rolls each of their various brands of leather belting and a board display of all kinds of textile leather specialties. They also expect to have a motion picture machine and will show on a screen pictures of the process of the manufacturing of leather belting.

Corn Products Sales Co.

Corn Products Sales Co. will display a full line of their starches and dextrine, and have sufficient space that their customers and friends may come and rest with them. Dr. Cathcart, technical director form the New York office, will attend, as will Mr. Van Zandt and Mr. Alexander, and the exhibit will be in charge of Albert G. Smith.

J. E. Sirrine & Co.

The main display of J. E. Sirrine & Co., engineers, Greenville, S. C., will be a special exhibit representing in relief several new industrial plants embodying the most modern factory construction principles. The scene is in the form of a stage. The buildings are cut out of wall board and tinted to represent exterior building finish. There are placed so as to form a group of buildings rep-

resenting such plants as the Marvin Carr plant of the Durham Hosiery Mills, one of the Camel cigarette factories of the R. J. Reynolds Tobacco Co., Hampshire Spinning Co., Thatcher No. 2 of the Standard-Coosa-Thatcher Co., the new power plant of the Ware Shoals Mfg. Co., and the new reinforced concrete weave shed of the Republic Cotton Mills. In addition to these the company will have several large photographs of interiors and exteriors of recently constructed mills and bleacheries.

Members of the organization will be in attendance at the booth during the Exposition.

Fairbanks-Morse & Co.

This company will occupy two spaces comprising about 225 square feet floor space and will feature an elaborate exhibit of textile ball bearing motors operating a spinning frame and loom. Something new in textile ball bearing motors and textile motor application will be shown, officials state.

The company also plans to have a unique moving fan exhibit which has attracted much attention at other expositions.

The following will be in charge of the booth: E. M. Fisher, of the executive offices at Chicago; Mr. Thompson, general manager, and W. A. Black, chief engineer, of the Fairbanks-Morse Electrical Manufacturing Co., of Indianapolis; C. T. Fugitt, manager, Glenn Corlette, of the engineering staff, and T. M. Eamon, field engineer, of the Atlanta branch; J. R. Kindig, manager of the textile mill department, Charlotte.

Greenville Textile Supply Co.

This company will occupy Booth 203 in the Annex. They will have a regular display of textile loom supplies.

Those in charge will be C. Q. Mason and H. O. Wallace.

Ashworth Bros, Inc.

Ashworth Bros. will have one of their card machines in operation making cylinder fillet set in the special 6-ply foundation. They will also exhibit samples of their improved hardened point card clothing and licker-in wire.

Blocker, Gregory Co., Inc.

This company will exhibit the following:

A full line of Steel-Klad fibre and fibre trucks, boxes and roving cans, featuring several recent innovations in this line.

An assortment of weave room specialties, including their own special rustless filling truck for conditioning bobbins.

A complete line of trucks wheels, including their own Trouble-Proof caster which was designed especially for use in textile mills.

The display will be in charge of H. T. Blocker, assisted by several salesmen.

Mason Regulator Co.

Mason Regulator Co. is going to show a full line of regulating appli-

National Vulcanized Fibre Co.

This exhibit will consist of Laminar fibre seamless roving cans, warehouse cars, doffing cars, round tapered baskets and oblong mill baskets. The exhibit will show a complete equipment of fibre receptacles for textile mill purposes.

Standard Oil Co.

Standard Oil Co. will have booth arranged in nature of a rest room, ances, including damper regulators, etc.

easy chairs, settee and writing table, certain novelties pertaining to the oil business, attractive and instructive in nature, with souvenirs of the Textile Exposition.

North Carolina Mill Statistics

(Continued from Page 12)

"It is third in the manufacture of print cloth, lawns, nainsooks, cambrics, and similar materials and in tire fabrics other than duck.

"The plants are largely owned by native North Carolinians, who are familiar with conditions. They are largely operated by natives. An added advantage is the location close to raw materials, fuel and power. Labor is generally to be found within the State and is generally available to the extent needed.

"Reports from the manufacturers themselves show that the cotton mill industry has reached new high levels in North Carolina. What a decade or two ago was but an industry in the embryonic stage is now the State's greatest and bids fair soon to lead the entire nation. It now leads the entire South. The capital invested, raw products used, value of products manufactured and number of persons employed are all several 100 per cent greater in 1924 than they were 12 years ago."

An Arbitrary Control of Youthful Labor.

The original intent of child labor laws was to remedy abuses and to protect those of tender years from long hours, and from unhealthful or dangerous work. The States now have that power, are all exercising it and are steadily improving their laws. But this amendment would confer on the Federal Government a limitless new power, arbitrarily to control all youthful labor up to 18 years, even healthful and suitable labor, done in vacation subject to no control but the will of Congress!

Do the fathers and mothers of Kansas wish to surrender to Congress the power to say whether their children under 18 may do any useful work in the home, in the garden or on the farm? If not, they should get busy and let their representatives in the Legislature know what they think about this amendment.—Topeka (Kan.) Journal.

Reclaiming the Industrially Injured

(Continued from Page 7)

disabling deformity, no matter how slight. It is not sufficient that a wound be healed, or a broken bone united. The most injured part must be restored to perfect usefulness or the employer must pay for the loss.

It is these facts which have brought to the attention of employers, and their insurance carriers, the need of human conservation and reclamation. It is a paying propostion.

The length of temporary disability can greatly cut down by reconstructive measures; and these same measures will, in many cases, make is possible to finally discharge a worker from treatment with a perfect functional result, where there would otherwise have been costly permanent loss.

The most frequent causes of long continued disability are: (1) Pain, (2) Weakness, (3) Stiffness, or (4) Loss of some part of the body, (5) Exaggeration, (6) Malingering, and (7) the Neuroses may also play a part.

In order to avoid or minimize these factors, we should begin our reconstruction efforts at the earliest possible moment. It is of the utmost importance that the patient be kept in a hopeful and contented frame of mind, and he must have complete confidence in those who are caring for him. One of the surest ways to antagonize an injured worker, and start him on the road to discontent and fault-finding, is to attempt to learn all the intimate details of his accident, or fix the responsibility, by a grilling or tactless third degree. Remember, he is sick and in pain, this makes him apprehensive. He should be treated with every consideration. His care should be in charge of a competent industrial surgeon. If this surgeon is a member of a general hospital staff, and assumes sole charge of the injured, it will engender confidence in the worker, minimize coufusion in treatment, and assure him, in many cases, better care and attention than he would otherwise get.

Consulations with specialists may be held as required, but there must be no indecision or wavering in the conduct of the case, or the patient will be quick to detect it and doubts will be implanted in his mind.

Don't lie to him. He will learn the truth and then your influence with him is at end. Assure him that he will get the best of care and that nothing will be left undone. Remove his fears of the future by convnicing him that he will be able to work and be self-supporting; and see that his family does not come to want. A little money and kindness here will be amply repaid latter.

As he recovers from the pain and shock of the injury, he must not be permitted to lie in bed for hours, unoccupied save with thoughts of his troubles. Give him something to do and he will get well sooner. I try to find out what my patient has been interested in before the accident. Many times it has been a course of study at night, drawing, designing or neddlework. If it is possible, urge them to continue it. Take an interest in their efforts and encourage them. Point out to them that this in an opportunity to carry on their studies or enjoy their hobbies. Many of our patients have produced beautiful and useful articles of wearing apparel while hospitalized.

In many cases I request the nurse to furnish them with a supply of gauze to be folded and made into dressings. All of this is occupational therapy. It should be started with most patients while in the hospital, and may be carried on during convalescence.

Vocational re-education may be merely the carrying on to completion of their studies, so as to prepare an employee, so injured as to be unfit to return to his former work, for some other occupation. Or it may be necessary, during convalescence, to teach them some new way of doing their work, or perhaps they may have to learn an entirely new trade or occupation but in any in any case, they should not just be cured of their anatomical ills and then be discharged from treatment, and left to shift for themselves. If they are, they will quickly sink into a state of depression. They will compare themselves with unhandicapped individuals, and perhaps, after an effort or two to make good, will cry out, "What's the use? I can't hold up my end with the other fellows." Thus we have placed another burden upon the family and community, have lessened the confidence of our workers in their employers, and have undoubtedly added greatly to the amount of compensation our must pay.

As the wounds or broken bones begin to heal, other helpful reconstructive measures may be employed. Various fields of science have supplied us with indispensable adjuncts in our efforts to secure the speediest possible and most complete return of function.

We must use (1) heat, (thermotherapy); (2) electricity, (electrotherapy); (3) hot or cold baths or douches, (hydrotherapy); (4) light, usually artificially generated for its high ultra-violet content, (heliotherapy); (5) Mechanical apparatus; (6) massage; and (7) active and passive movement. These are all grouped under one term—Phisiotherapy.

Almost every case of injury, whether civil or industrial, that is dismissed from our general hospitals, with the perfunctory "Cured" on their chart, shows some evidence of disability. If this is permitted to remain, the patients suffer and industry pays. However, by means of physiotherapy we are usually able to relieve the pain, build up and strengthen the tissues, and loosen stiff joints. This sounds though Physiotherapy were a panacea or cure-all, suitable for the exploitation of quacks. Unfortunately many physicians have looked upon

it as such, and have therefore deprived their patients of its benefits. But Chiropractors and Ostepaths, who were quick to see its possibilities, have adopted it wholesale. However, because their inability to properly diagnose, and because of their lack of knowledge and the indications and limitations of Physiotherapy, there results have not always been satisfactory.

Physiotherapy is one of the most important factors in cutting down compensation awards, which are becoming ever larger, due to a broadening of the law. It removes, or minimizes, the factors which prolong temporary disability, and by increasing the restoration to function, it obviates, or lessens a permanent award.

A few of our examples in The Clark Thread Company are only typical of what may be accomplished generally by a concentrated effort to reclaim the injured:

M. L. had a comminutted fracture of her right should. When discharged from the Hospital as "Cured" the disability was 85% of her arm. By means of Physiotherapy it was lowered to 33 1-3 per cent, a saving of 51 2-3 per cent of the use of the arm, and $1,085.04 compensation.

J. F. suffered a severe injury of his left hand. When discharged from the hospital with his wounds all healed, the hand was practically useless. By means of Physiotherapy we restored his hand to 80 per cent of its former usefulness and saved the company $1,440 permanent compensation.

J. H. had a badly comminuted fracture of the thigh. Before the beginning of Physiotherapy his disability was 60 per cent of the leg. After a prolonged course of treatment the leg was restored to perfect use—no permanent disability and $1,785 saved by the company.

C. S. had a severe burn of her left arm extending from the shoulder to the wrist. After the wounds were healed there was 25 per cent loss of usefulness of the arm. Under treatment this disability was removed. The arm is now as strong and free in movement as before the accident, and a permanent compensation award of $850 was saved.

It is more difficult to show the actual savings in temporary disability because a comparison with like types of cases untreated with reconstructive measures would be unfair, on account of many extraneous factors. Nevertheless, we feel certain that the return to usefulness and function, of our injured, is much more speedy than anything we witnessed before the use of Physiotherapy.

Perhaps the severity rates could be of interest. The following figures cover a period of years in the same plant under approximately the same conditions before and after the advent of efforts at rehabilitation:

Severity Rate.

1920	.532
1921	.401

After the introduction of reconstructive measures the rate has fallen to:

1922	.285
1923	.107

This means that our employees are returned to work much more quickly now than was possible before.

This phase of our work is of such importance that we have recently established completely equipped branches of our medical department in two of our smaller outlying plants, one six miles and the other twelve miles distant from our main hospital. However, these branches are intimately associated with our main organization, and a uniform type of treatment is employed.

Many States have established clinics where this work is carried on for those concerns which have no provisions for such treatment in their plant hospitals.

There are many cases of permanent loss of body substance which we must attempt to replace with artificial limbs. These workers will then, of necessity, need to be re-educated and perhaps vocationally trained before their rehabilitation is complete and they are again ready to work for a living. Still, others are injured in such a way that it is impossible to supply them with artificial limbs. In these cases it may be necessary to vocationally re-educate the injured and thus, by teaching him some useful occupation, we make him an independent and self-supporting citizen instead of a cripple.

J. R. was an ordinary department sweeper when his right hand became caught in a tube-ticketing machine and three fingers and part of a fourth were amputated. Because of his loss he was unable to return to his regular work. He had been interested in figures and we encouraged him. He studied bookkeeping and now fills a position in our office. A short time ago he said to me, "It was hard to lose my fingers, but I guess it was the best thing after all, for I never would have gotten very far up in the department."

I have many times seen an opportunity thus masked as an accident or misfortune.

References.

1. H. Mock, "Industrial Medicine and Surgery."
2. T. L. Hazlett, "Rehabilitation of the Industrially Handicapped."
3. Kober and Hayhurst, "Industrial Health."

Cotton Goods

New York.—Trading in the cotton goods markets was moderately large last week, some of the activity having been halted by the rise in the cotton market. Mills as a rule are declining to take late contracts at present prices. Some sales of gray goods for delivery in the last quarter of the year were reported last week, but the bulk of the sales were made from spot and prompt delivery.

Prices on print cloths, sheetings and convertibles held fairly steady through the week. A good deal of business in finished goods has been going on at prices considerably lower than replacement costs, this trading having been done to reduce stocks. It was especially noticeable on coarse lines of colored goods.

There was a fairly good trade in fancy goods for future delivery, most of the goods wanted being crepes, rayon and silk mixtures. The business is staple goods figured very little in future trading.

The wholesale demand is becoming considerably larger but as yet is confined principally to a hand-to-mouth business. Many mills are asking agents to delay sales until prices are higher. The wholesale demand was best for tickings, denims, wide sheetings, spreads, twoels and sheets and the newly styled percales and fancy prints. Buyers found it harder to secure goods, because of the effect of the long curtailment period and of the low prices which they bid.

The cloth markets were quiet at the end of the week. There was a good inquiry for goods at prices just under prevailing quotations, although the patter are not yet up to a parity with cotton. Many grey goods are at least two cents a pound under a parity with cotton, which the difference in finished goods prices is 4 to 5 cents under. Wherever prices were slightly under market level, buyers picked up odd constructions of print cloths and convertibles. Some of the narrow odd goods of thin construction were higher than the wider widths.

Trade in fine cottons was generally quiet. There was a fairly good business in some special constructions of broadcloths and a market for new shirtings and fancy dress goods.

In the cotton duck market there was an active demand for numbered duck and a good interest in all painted ducks. The tent and awning trades are using more and more woven stripe duck and less of the plain goods than were formerly largely used for awnings.

The tire fabric market continued on a very satisfactory basis last week. An encouraging amount of new business was noted and the carded peeler American contracts was kept at 56 cents. The best demand was for the 23s 5-3 ply yarn style cord fabrics.

With the holidays and a strong cotton market interest in the Fall River print cloth market during the week was light. The total sales for the week are estimated at 40,000 pieces which is confined almost entirely to 36-inch low counts, with the exception of occasional small amounts of other numbers. Sateens and twills which showed some life during the week previous are again very quiet, with the advance in cotton mills have strengthened on their asking prices and some buyers who sought to place orders at previous prices have found mills very firm.

John V. Farwell Company, Chicago, says in its weekly review of trade: "The outstanding feature of wholesale dry goods business at present is the broader expansion in commitments. Road orders are much larger in volume than at any other time this year. The first consumer demand through early fall weather found retailers unprepared in lines where production curtailment at mills had caused shortage of desirable goods, especially dress goods and silks. Market is strong on print cloths and cotton goods. Retailers are ordering forward their fall shipments of handkerchiefs and preparing for holiday requirements. Ribbons are picking up for making of gifts and lingerie purposes. Buyers have been in market in larger numbers during the week. Collections show improvement.

Cotton goods prices were quoted as follows:

Print cloths, 28-inch 64x64s, 7¼; 64x60s, 7⅛; 38½-inch 64x64s, 9½; brown sheetings, Southern standards, 15½; denims, 2.20s, 20; tickings, 8-ounce, 25 to 26; prints, 10; staple ginghams, 32-inch, 15; dress ginghams, 18½ to 21.

Spanish Textiles Depressed.

The depression in the Catalonia textile industry has been further accentuated by the complete shutdown of the mills in certain districts, and the curtailment of production in Barcelona to between 25 and 50 per cent of capacity. The general condition of the Spanish cotton industry is very unfavorable, and a bad winter is expected, according to the local press.—Assistant Trade Commissioner James G. Burke, Madrid, September 16.

The Yarn Market

Philadelphia, Pa.—The yarn markets were stronger during the week and prices showed a further gain. Dealers in this market advanced prices on Southern carded yarns from half a cent to a cent a pound, bringing the market here nearer in line with spinners' prices than it has been for some time. While the demand was still largely confined to hand-to-mouth buying, dealers and commission houses showed a tendency to cover their requirements for at least 90 days ahead. It was reported that many mills last week sold up through the end of the year.

In spite of the hesitant attitude of buyers, short selling has been practically eliminated and msot dealers are asking full market prices. Prices on lots for spot and prompt delivery are being held for replacement values, a condition that has not prevailed during the past several weeks.

Carded yarns continue to be in better demand than combed yarns. The call for combed yarns continued light and there was no material changes in the quotations of the previous week and these yarns have not shared in the general advance that followed higher cotton prices.

The fluctuations in the cotton market, even when prices went lower during the week, had little effect on yarns. Spinners consider themselves in a stronger position than they have occupied for some time and would not accept business at concessions.

Prices showed some irregularity and published quotations are considered purely nominal. The advance in yarn prices had tended to check buying, according to dealers here; who state that few yarn consumers are willing to operate on contracts until they can be more certain of the probable trend of prices.

In spite of these factors, however, spinners are getting an increasing amount of business. Yarn dealers are showing less resistance to prices, as a rule, and are getting nearer to spinners' asking prices. The demand for yarn last week was undoubtedly stronger.

Two-Ply Chain Warps.

2-ply 8s	42	a	2-ply 24s	48	a
10s	43	a	2-ply 26s	49	a
12s to 14s	44	a45	2-ply 30s	50	a
2-ply 16s	45	a	2-ply 40s	56	a
2-ply 20s	46	a	2-ply 50s	64	a

Two-Ply Skeins.

8s	41	a	40s	57	a
10s to 12s	42	a	40s ex.	61	a
14s	43	a	50s	67	a
16s	45	a	60s	75	a
20s	46	a	Tinged Carpet—		
24s	47	a	3 and 4-ply	37	a38
26s	48	a	White Carpet—		
30s	51	a	3 and 4-ply	39	a

Par. Waste Insulated Yarn.

6s, 1-ply	3o	a	12s, 2-ply	39	a
8s, 2, 3 and 4-ply	35½	a	20s, 2-ply	44	a
			26s, 2-ply	47	a
10s, 1-ply and			30s, 2-ply	49	a

Duck Yarns.

3, 4 and 5-ply—			3, 4 and 5-ply—		
8s	39	a	16s	44	a
10s	40	a	20s	44½	a45
12s	41	a42			

Single Chain Warps.

10s	43	a	24s	48	a
12s	43	a	26s	49	a
14s	43½	a	30s	51	a
16s	44	a	40s	57	a
20s	45	a			

Single Skeins.

6s to 8s	42	a	20s	45	a
10s	43	a	24s	46	a
12s	43	a	26s	48	a
14s	43	a	30s	51	a
16s	44	a			

rame Cones.

8s	41½	a	22s	45	a
10s	42	a	24s	45½	a
12s	42½	a	26s	46	a
14s	43	a	28s	46½	a
16s	43½	a	30s	48	a48½
18s	44	a	30s tying in	46½	a47½
20s	44½	a	40s	55	a53

Combed Peeler Skeins, Etc.

2-ply 16s	55	a56	2-ply 50s	70	a
2-ply 20s	57	a58	2-ply 60s	75	a
2-ply 30s	60	a62	2-ply 70s	85	a
2-ply 36s	60	a65	2-ply 80s	95	a
2-ply 40s	65	a67			

Combed Peeler Cones.

10s	50	a	30s	60	a
12s	51	a	32s	62	a
14s	52	a	34s	64	a
16s	52½	a	36s	65	a
18s	53	a	38s	68	a
20s	53½	a	40s	70	a
22s	54	a	50s	75	a
24s	54½	a	60s	80	a
26s	55	a	70s	90	a
28s	57	a	80s	96	a

Carded Peeler Thread Twist Skeins.

20s, 2-ply	52	a	36s, 2-ply	62	a
22s, 2-ply	53	a	40s, 2-ply	64	a
24s, 2-ply	55	a	45s, 2-ply	69	a
30s, 2-ply	58	a	50s, 2-ply	74	a

Carded Cones.

10s	47	a	22s	53	a
12s	48	a	26s	55	a
14s	49	a	28s	57	a
20s	52	a	30s	59	a

Chinese Trade Suspended.

Since communications between Shanghai and the interior have been almost completely suspended for several weeks it is obvious that the trade of that city has been very much disrupted. One of the first effects of the disturbance was the closing of the Shanghai piece goods auctions on August 21. The auctions have not been resumed, and at the present time, clearances of piece goods have practically ceased.—Cable from Commercial Attache Julean Arnold, Peking.

India's Piece Goods Market.

A lack of demand is still apparent in hte Bombay piece goods market, but prices are steady. Local goods are moving slowly. Stocks of piece goods are almost nil, and the market generally is expected to improve now that the success of the monsoon is practically assured. — Cable from Trade Commissioner James E. Miller, Bombay.

Dutch East Indies Trade.

The textile demand is improving. Stocks of cotton goods are small, and importers are placing orders for prompt shipment.—Cable from Trade Commissioner J. F. Van Wickel.

Want Department

Wanted—To correspond with mill in need of superintendent. Would prefer mill that is run down and not getting results. 40 years of age, married, strictly sober. Can give good reference. Now employed. Superintendent on present job six years. 22 years' experience as superintendent and overseer carding and spinning. Address "R. B. T.," care Southern Textile Bulletin.

Wanted — Napping department second hand. One who knows how to operate, grind and fix Woonsocket nappers so as to get best results on flannels, cottonades and napped plaids. Must be willing to work for success. Good position for the right man. First-class mill; one of the best cities in the South. Give all particulars in first letter. Address M. D. H., care Southern Textile Bulletin.

Superintendent Available

Wanted — Position as superintendent. Now employed. On present job five years. Address "Q. R.," care Southern Textile Bulletin.

Man with 28 years in cotton yarn mill, 20 years official, ability, trained in every branch, would like to hear of vacancy with chance to prove ability. Opportunity for new mill to secure A-1 man, highly recommended. Address A. C., care Southern Textile Bulletin.

For Sale

1 Keeler Horizontal Return Tubular Boiler, 90 H. P., 60" diameter, 17 feet long. To carry 100 lbs pressure. The Randolph Mills, Franklinville, N. C.

PRACTICAL SUPERINTENDENT

Man 42 years of age, married, strictly sober, 28 years' experience on carded and combed knitting and weaving yarns, counts 1s to 60s, and plain weaving, expert carder and spinner, efficient manager, can get quality and quantity. Capable of taking complete charge of the manufacturing of a mill of any size. Would like to connect with a good mill or chain of mills. Best of references from past and present employer. Now engaged. Could accept position in 30 days. Address Practical, care Southern Textile Bulletin.

WANTED

First-class man to reneck and fit cotton mill steel rollers. None but a man capable of doing first-class work of this kind need apply. Cox Foundry and Machine Co., Atlanta, Ga. Station A.

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We do the engineering, and have had 32 years experience solving water problems satisfactorily for textile mills.

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10,000 SPINNING SPINDLES

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⅞" WHIRL
STANDARD McMULLAN BLADE
VARYING 2 TO 4 YEARS OLD.
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Manufacturers of Textile Winding Machinery

Winding machines for single and ply yarns, cotton, woolen, worsted and silk. Write for circular describing the NEW WIND DOUBLER, also the No. 80 for winding SUPERCONES.

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EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is $2.00, which will also cover the cost of carrying a small advertisement for one month.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only $1.00.

During the three months' membership we send the applicant notices of all vacancies in the position which he desires.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT POSITION as roll coverer. Have had 20 years' experience and can give excellent references. No. 4324.

WANT POSITION as overseer spinning. Overseer for 20 years on all counts and colors, both carded and combed, from various stocks. Can get results. Would consider $33 weekly, with free rent. No. 4327.

WANT POSITION as superintendent. My experience covers mills in both North and South on a wide variety of goods and yarns. Excellent references to show past record of unusual achievement. No. 4328.

WANT POSITION as superintendent of cotton yarn or good mill. Man of unusual ability and can give references to show excellent past record. No. 4329.

WANT POSITION as overseer spinning or night superintendent. Qualified by experience and training to handle room on efficient basis. A-1 references. No. 4330.

WANT POSITION as overseer weaving. My experience covers wide variety of fancy goods, including silk mixture. First-class references as to character and ability. No. 4331.

WANT POSITION as overseer carding or spinning, or would take good second hand's place. North Carolina preferred. Long experience I. C. S. graduate, age 30, married, sober. References. No. 4332.

WANT POSITION as superintendent or overseer weaving. Practical, experienced man on many different fabrics. Long and satisfactory record as overseer and superintendent. Best of references. No. 4333.

WANT POSITION as overseer cloth room. Now employed, but wish larger place. Long experience. Best of references. No. 4334.

WANT POSITION as superintendent or assistant superintendent in good mill on white work. Man of good habits, unusual ability and have long record of satisfactory services. No. 4335.

WANT POSITION as superintendent, prefer yarn mill. Now employed but can change on short notice. Best of references. No. 4336.

WANT POSITION as superintendent, or overseer carding, spinning and twisting. Experienced man with excellent past record. ood references. No. 4337.

WANT POSITION as overseer carding or spinning, or both. Now employed, but want larger place. First-class references to show character and ability. No. 4338.

WANT POSITION as overseer weaving or assistant superintendent. Have had 19 years as overseer on all grades of yarn and cloth. Excellent references. No. 4340.

WANT POSITION as overseer carding or spinning or superintendent of yarn mill. Now employed but can change on short notice. Can get quality production at low cost. Best of references. No. 4341.

WANT POSITION as overseer carding, 20 years as overseer on all classes of work. Now employed. Age 40, married, have family. Good references. No. 4342.

WANT POSITION as overseer weaving. Experienced on wide variety of fabrics, both plain and fancy. Have excellent record and can give first-class references as to character and ability. No. 4343.

WANT POSITION as superintendent or overseer carding or spinning room. Familiar with fine and coarse numbers and know how to get satisfactory results. Good references. No. 4344.

New Hosiery Colors Gain Recognition

There were but few major changes in the color situation during the past week, the leaders maintaining their positions and slower sellers coming up from the bottom, according to the weekly report chart of the Gotham Hosiery Shops. Black, buck and grain continue to lead in the sales of the regular lines while grain, skyn and black hold that position in the sales of the sheers.

Radical changes are not to be found in the chart except the addition of several new colors which have been taken up by the buying public. These new colors are cedar, which immediately took thirteenth place in the sales for the week, twig, which holds twenty-third place, and carbon which holds last place in the regulars, and nineteenth place in the sheers.

The changes most noticeable during the week were the rise of caramel, in the regulars from ninth to seventh place, piping rock from eleventh to ninth place, and suede from nineteenth to seventeenth place. The drops were more numerous.

In the sheers the drop of graphite from fifth to eighth place was noticed as well as that of acorn from fourteenth to seventeenth place. Buck also lost one place, that of fourth to fifth.

In the regular lines the followning colors were sold according to the chart, black, buck, grain, skyn, medium gray, dark brown, caramel, white, piping rock, reindeer, gun metal, medium brown, cedar, acorn, bobolink, shell, suede, nu, pussywillow, light brown, gravel, silver, twig, and carbon.

Brazilian Textile Industry.

In 1921 there were 243 establishments engaged in the cotton textile industry in Brazil, employing about 106,000 operatives, and with a total production valued at 445,800,000 milreis. While most of this output is consumed in Brazil, there is a small surplus for export. Nearly 800 metric tons of cotton goods valued at about 8,500,000 milreis were exported in 1923, chiefly to Argentina, Uruguay, Paraguay, and Peru. (The average exchange rate of the Brazilian milreis was $0.131 in 1921, $0.129 in 1922 and $0.102 in 1923.) Such circumstances as high import duties on foreign cotton textiles, depreciated Brazilian currency, low wages, and small overhead charges, have contributed to the development of the domestic industry. Despite the large national production, there is a good market in Brazil for high-grade cotton textiles. Great Britain leads in this trade, followed by the United States. During the calendar year 1922, the latest statistics available, Brazil imported 3,101 metric tons of cotton piece goods valued at $9,684,196 (U. S. C.), of which Great Britain supplied 2,361 metric tons worth $6,745,675 (U. S. C.) and the United States only 281 metric tons with a value of 0962,794 (U. S. C.) Despite the predominance of British goods, there is a good market here for American textiles.

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STRIPPER CARDS—
L. S. Watson Mfg. Co.

SWITCH BOXES—
Chicago Fuse Mfg. Co.

TEXTILE MACHINERY SPECIALTIES—
Cocker Machine and Foundry Co.
Hyatt Roller Bearing Co.

TEXTILE SODA—
J. B. Ford Co.

TEMPLES—
Draper Corp.
Hopedale Mfg. Co.

TESTING APPARATUS (Fabrics)—
B. F. Perkins & Son, Inc.
Henry L. Scott & Co.

TRANSFER STAMPS—
Kaumagraph Co.

TRANSMISSION BELTS—
Charlotte Leather Belting Co.
Chicago Belting Co.
Grant Leather Co.
Edward R. Ladew Co.
E. F. Houghton & Co.
Graton & Knight Mfg. Co.

TRANSMISSION MACHINERY—
Allis-Chalmers Mfg. Co.
Tolhurst Machine Works.
William Sellers & Co., Inc.
Wood's, T. B., Sons Co.

TOILETS—
Vogel, Jos. A., Co.

TOOL CABINETS AND STANDS, STEEL)—
Lupton's, David, Sons Co.

TRANSMISSION MACHINERY—
Hyatt Roller Bearing Co.

TRANSMISSION SILENT CHAIN—
Link-Belt Co.
Morse Chain Co.

TRUCKS (Mill)—
Diamond State Fibre Co.
Rogers Fibre Co.

TUBES, PAPER—
Sonoco Products Co.

TURBINES (STEAM)—
Allis-Chalmers Mfg. Co.

TWISTING MACHINERY—
Draper Corp.
Fales & Jenks Machine Co.
Saco-Lowell Shops.
Whitin Machine Works.

TWISTING TAPES—
Barber Mfg. Co.

UNDERWEAR MACHINES—
Merrow Machine Co.

VENTILATING APPARATUS—
American Moistening Co.
Parks-Cramer Co.

VENTILATING FANS—
B. F. Perkins & Son, Inc.

WARPERS—
Cocker Machine & Foundry Co.
Crompton & Knowles Loom Works
Draper Corp.
Easton & Burnham Machine Co.
T. C. Entwistle Co.

WARP DRESSING—
Arnold, Hoffman & Co., Inc.
Bosson & Lane.
Drake Corp.
L. Sonneborn ons, Inc.
Seydel-Thomas Co.
Wadsworth, Howland & Co., Inc.

WARP STOP MOTION—
Draper Corp.
Hopedale Mfg. Co.
R. I. Warp Stop Equipment Co.

WARP TYING MACHINERY—
Barber-Colman Co.

WASHERS (FIBRE)—
Rogers Fibre Co.

WASTE BINS, STEEL—
Lupton's, David, Sons Co.

WASTE RECLAIMING MACHINERY—
Saco-Lowell Shops.
Whitin Machine Works.
Woonsocket Machine & Press Co., Inc.

WASTE PRESSES—
Economy Baler Co.

WATER INTAKE SCREENS—
Link-Belt Co.

WEIGHTING COMPOUNDS—
Arabol Mfg. Co.
Atlantic Dyestuff Co.
Bosson & Lane.
Marston, John P.
Metz, H. A.
Jacques, Wolf & Co.
Seydel-Thomas Co.

WATER WHEELS—
Allis-Chalmers Mfg. Co.

WELL DRILLING—
Sydnor Pump & Well Co

WHIZZERS—
Tolhurst Machine Works.

WINDERS—
Easton & Burnham Machine Co.
Saco-Lowell Shops.
Universal Winding Co.

WINDOWS—
Lupton's, David, Sons, Inc.
Carrier Engineering Corp.
Parks-Cramer Co.
Tolhurst Machine Works.

WINDOW GUARDS—
Cyclone Fence Co.

WINDOW FRAMES AND SASH, STEEL—
Lupton's, David, Sons Co.

WIRE PARTITIONS—
Cyclone Fence Co.

YARNS—
Paulson, Linkroum & Co.
Mauney-Steele Co

YARN TENSION DEVICE—
Eclipse Textile Devices, Inc.

YARN PRESSES—
Economy Baler Co.

YARN TESTING MACHINES—
H. L. Scott & Co.